# Arlington Conservation Commission

**Date:** Thursday, June 20, 2024
**Time:** 7:00 PM
**Location:** Conducted by Remote Participation.

Please register in advance for this meeting. Reference materials, instructions, and access information for this specific meeting will be available 48 hours prior to the meeting on the Commission's agenda and minutes page. This meeting will be conducted in a remote format consistent with Chapter 2 of the Acts of 2023, which further extends certain COVID-19 measures regarding remote participation in public meetings until March 31, 2025. Please note: Not all items listed may in fact be discussed and other items not listed may be brought up for discussion to the extent permitted by law. This agenda includes those matters which can be reasonably anticipated to be discussed at the meeting.

## Agenda

1. Administrative
    a. Review Meeting Minutes.
    b. Correspondence Received.
    All correspondence is available to the public. For a full list, contact the Conservation Agent at concomm@town.arlington.ma.us.
    c. Administrative Report.
        - FEMA Map Update.
    d. Request for Determination of Applicability: 49 Spy Pond Lane.
    The Conservation Commission will hold a public hearing to consider a Request for Determination of Applicability under the Wetlands Protection Act and Arlington Bylaw for Wetlands Protection for the construction of a deck at 49 Spy Pond Lane.

2. Discussion
    a. Mt. Gilboa Feasibility Study 90% Draft Presentation.
    Martha Lyon Landscape Architecture and Community Circle will present draft findings and recommendations for the Conservation Commission owned property at Mt. Gilboa.
    b. Water Bodies Working Group.
    c. Tree Committee Update.
    d. CPA Committee Update.
    e. Park & Recreation Commission Liaison (next meeting 6/25/24, Susan Chapnick).

f. Medford Boat Club Request for Certificate of Compliance.

3. Hearings

**DEP #091-0363: Notice of Intent: Medford Boat Club.**

DEP #091-0363: Notice of Intent: Medford Boat Club.
The Conservation Commission will hold a public hearing under the Wetlands Protection Act and Arlington Bylaw for Wetlands Protection to consider a Notice of Intent for an aquatic management program by the Medford Boat Club located on the Mystic Lakes.

**DEP #091-0358: Notice of Intent: 18 Hamilton Road.**

DEP #091-0358: Notice of Intent: 18 Hamilton Road.
The Conservation Commission will hold a public hearing to consider a Notice of Intent under the Wetlands Protection Act and Arlington Bylaw for Wetlands Protection for the restoration of Bank associated with Spy Pond at 18 Hamilton Street.

**DEP #091-0356: Notice of Intent: Thorndike Place (Continued from 06/06/2024).**

DEP #091-0356: Notice of Intent: Thorndike Place (Continued from 06/06/2024).
The Conservation Commission will hold a public hearing under the Wetlands Protection Act to consider a Notice of Intent for the construction of Thorndike Place, a multifamily development on Dorothy Road in Arlington. The Commission will vote to continue the hearing to the July 11, 2024, meeting.

## Town of Arlington, Massachusetts

**Correspondence Received.**

**Summary:**
Correspondence Received.
All correspondence is available to the public. For a full list, contact the Conservation Agent at concomm@town.arlington.ma.us.

**ATTACHMENTS:**

| | Type | File Name | Description |
|---|---|---|---|
| 🗋 | Reference Material | Correspondence_Received_-_Thorndike_Place_-_Coalition_to_Save_Mugar_Wetlands.pdf | Correspondence Received - Thorndike Place - Coalition to Save Mugar Wetlands.pdf |

June 3, 2024

To Members of the Conservation Commission:

As addressed previously, BSC's letter dated February 28th stated that on February 15, 2024, "BSC performed groundwater measurements of three wells installed on the site". At an earlier hearing, it was requested of the Applicant to provide a log detailing the name of person(s) conducting the measurements, witnesses, the time and method used, and the resulting measurements. **It is critical that BSC be held accountable for their data, therefore we respectfully request that the Conservation Commission require that BSC provide this information.**

**Question: Has the Applicant provided this information? If so, should this not be made publicly available by posting it to the website?**

In addition, the Applicant should be **continuously monitoring** any and all wells installed on the property. Continuous monitoring of the wells is vital in order to obtain accurate data over time including the peak rise in groundwater. Monitoring wells at one moment in time, on any given day, could result in inconclusive data and missing the maximum groundwater level. *Since the Applicant installed their well late in the spring season, well after March 1st, they missed the peak seasonal high groundwater level.*

**In order to provide thorough data, we ask the Conservation Commission to require the Applicant to monitor all wells through the next spring season.**

As referenced in BSC's own report prepared for the Mystic River Watershed Association in 2017 (see attached), their conclusions and recommendations on the protection of wetlands which offer significant benefits are contradictory to their representation of this project which supports development in an environmentally sensitive area.

*Likewise, community water supplies and streamflow are less impacted by drought when wetlands in the watershed are protected so that they are able to act as reservoirs for ground and surface water. Because they store water on the landscape, wetlands provide localized cooling, which enhances climate resiliency for neighboring humans, wildlife, crops, and native vegetation. Additionally, healthy ecosystems store carbon, and thus contributing to deceleration of global warming and climate change.*[1]

Thank you on Behalf of the Coalition to Save the Mugar Wetlands,

Jeanette Cummings, 32 Dorothy Rd.
Julie DiBiase, 29 Littlejohn St.

Cc: James Feeney, Arlington Town Manager
David Morgan, Environmental Planner/Conservation Agent
Ryan Clapp, Conservation Agent
Arlington Select Board
Arlington Land Trust

1. Mystic River Watershed Association
Climate-Resilient Riverbank and Ecological Restoration Planning Project
Medford, Arlington, and Somerville, MA, March 21, 2017 (Page 6)

## Town of Arlington, Massachusetts

**Administrative Report.**

**Summary:**
Administrative Report.

- FEMA Map Update.

**ATTACHMENTS:**

| | Type | File Name | Description |
|---|---|---|---|
| 🗋 | Reference Material | Flood_Zone_Changes.pdf | Flood Zone Changes.pdf |

To: Arlington Conservation Commission

From: David Morgan, Conservation Agent

Date: 06/18/2024

Re: Flood Zone Changes

The Federal Emergency Management Agency (FEMA) provided the Town of Arlington with preliminary updated flood data in 2023. Now, FEMA requires that the preliminary data replace the current data in all Conservation Commission matters.

Maps comparing the current and the preliminary data can be found at the following link.

https://storymaps.arcgis.com/stories/92ce50d0a6cd42ee835cfe22c4212a0b

# Flood Zone Changes

for the Town of Arlington, Massachusetts

Arlington Planning & Community Development, Engineering, GIS
June 12, 2023

## Introduction

The Federal Emergency Management Agency (FEMA) recently provided the Town of Arlington with updated flood data. The Town is collecting feedback about the accuracy of the data on the map. There is a form below where you can submit feedback. This feedback should be limited to copyediting, identifying changes or corrections to non-technical information, such as typos with boundaries and road names.

We are NOT seeking feedback on the designated flood areas.
**That will happen in the next step**, which will include a community meeting with FEMA. Feedback for this step must be received by **Friday July 10th.**

The Town will publicize the community meeting details when FEMA provides it via the website, Town Notice email, and social media.

Below you can see maps of the current flood zones and the preliminary changes FEMA has suggested. There is also a map with a swipe tool to move back and forth and compare the differences.

**About these Maps**
This map is called the Flood Insurance Rate Map or FIRM. It identifies places that are likely to flood, which are called Special Flood Hazard Areas.

Let's say you live in a house that is in a Special Flood Hazard Area (Zones A and AE). This means that there is a 1% chance that your house will flood every year. In other words, out of 100 years, your house will likely flood once.

If you live in a moderate flood hazard area (Zone X), there is a 0.2% chance that your house will flood every year. You may experience 1 flood every 500 years.

Please note that these probabilities are estimates. Climate change is speeding up the number of floods we see and how severe they are. The reality looks very different from the estimates.

The map also shows the regulatory floodway. This is where water moves (rather than pools) during a flood. This occurs in Zone AE but is labeled differently.

## Maps

**Current Official Flood Zones Map**


Current Official Flood Zones Map

**Preliminary Revised (2023) Flood Zones Map**

Preliminary Revised (2023) Flood Zones Map

**Flood Zones Comparison Map**

**LEFT of Swipe shows the CURRENT Flood Zones**

**RIGHT of Swipe shows the REVISED Flood Zone**

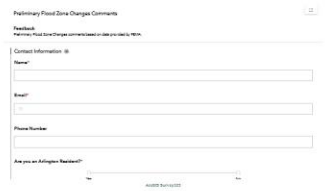
LEFT side of Swipe shows the CURRENT Flood Zones | RIGHT side of Swipe shows the REVISED Flood Zones

**Changes between the Official and Preliminary Flood Zones**


Changes between the Official and Preliminary Flood Zones

## Feedback

If you have Feedback based on the changes, Please fill in your contact information and Comments below.



## Town of Arlington, Massachusetts

**Request for Determination of Applicability: 49 Spy Pond Lane.**

**Summary:**
Request for Determination of Applicability: 49 Spy Pond Lane.
The Conservation Commission will hold a public hearing to consider a Request for Determination of Applicability under the Wetlands Protection Act and Arlington Bylaw for Wetlands Protection for the construction of a deck at 49 Spy Pond Lane.

**ATTACHMENTS:**

| | Type | File Name | Description |
|---|---|---|---|
| 🗋 | Reference Material | 49_Spy_Pond_Lane_(Lot_1)_COC_Request_Package.pdf | 49 Spy Pond Lane (Lot 1) COC Request Package.pdf |
| 🗋 | Reference Material | 2018-09-19_Settlement_Agreement_-_Signed_by_all_with_exhibits.pdf | 49 Spy Pond Lane Settlement Agreement 2018 |
| 🗋 | Reference Material | 47_Spy_Pond_Lane_Lot_1A_OOC.pdf | 47 Spy Pond Lane Lot 1A OOC 2019 |

**Massachusetts Department of Environmental Protection**
Bureau of Resource Protection - Wetlands

# WPA Form 8A – Request for Certificate of Compliance

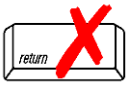
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

91-317
Provided by DEP

## A. Project Information

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.


1. This request is being made by:

Scott Seaver, Seaver Construction
Name

215 Lexington Street
Mailing Address

| Woburn | MA | 01801 |
|---|---|---|
| City/Town | State | Zip Code |

781 935 0130
Phone Number

2. This request is in reference to work regulated by a final Order of Conditions issued to:

Seaver Construction
Applicant

| May 12, 2020 | 91-317 |
|---|---|
| Dated | DEP File Number |

Upon completion of the work authorized in an Order of Conditions, the property owner must request a Certificate of Compliance from the issuing authority stating that the work or portion of the work has been satisfactorily completed.

3. The project site is located at:

| Lot 1: 49 Spy Pond Lane | Arlington |
|---|---|
| Street Address | City/Town |
| 12-4-2 | |
| Assessors Map/Plat Number | Parcel/Lot Number |

4. The final Order of Conditions was recorded at the Registry of Deeds for:

Seaver Construction
Property Owner (if different)

| Middlesex | 73606 | 227 |
|---|---|---|
| County | Book | Page |

Certificate (if registered land)

5. This request is for certification that (check one):

☐ the work regulated by the above-referenced Order of Conditions has been satisfactorily completed.

☒ the following portions of the work regulated by the above-referenced Order of Conditions have been satisfactorily completed (use additional paper if necessary).

All construction related to the dwelling; subsurface storm water management system; and planting of the buffer zone restoration area is complete. The requisite Vortechnics unit has been installed and approved by the Town of Arlington engineering department. Remaining activities include the remainder of the three year monitoring period for the restoration area plantings.

☐ the above-referenced Order of Conditions has lapsed and is therefore no longer valid, and the work regulated by it was never started.

## A. Project Information (cont.)

6. Did the Order of Conditions for this project, or the portion of the project subject to this request, contain an approval of any plans stamped by a registered professional engineer, architect, landscape architect, or land surveyor?

☒ Yes — If yes, attach a written statement by such a professional certifying substantial compliance with the plans and describing what deviation, if any, exists from the plans approved in the Order.

☐ No

## B. Submittal Requirements

Requests for Certificates of Compliance should be directed to the issuing authority that issued the final Order of Conditions (OOC). If the project received an OOC from the Conservation Commission, submit this request to that Commission. If the project was issued a Superseding Order of Conditions or was the subject of an Adjudicatory Hearing Final Decision, submit this request to the appropriate DEP Regional Office (see http://www.mass.gov/eea/agencies/massdep/about/contacts/find-the-massdep-regional-office-for-your-city-or-town.html).

TOWN OF ARLINGTON
Department of Public Works
51 Grove Street
Arlington, Massachusetts 02476
*Office (781) 316-3320 Fax (781) 316-3281*
Engineering Division

Wednesday, December 01, 2021

Seaver Construction, Inc.
Dana Tower
215 Lexington Street, Level 2
Woburn, MA 01801

**RE: Offsite stormwater Vortech unit – 47 Spy Pond Lane**

Mr. Tower,

Please accept this correspondence from the DPW Engineering Division as notification to you and the Arlington Conservation Commission as confirmation that the off-site stormwater unit conditioned with the 47 Spy Pond Lane Notice of Intent has been installed properly and a suitable as-built plan has been provided by Seaver Construction.

The as-built plan, with elevation data, was reviewed by the Engineering Division. In conjunction with staff field observations it was determined that the installation of the unit was in compliance with the approved design plans. Additionally, the Department of Public Works agrees to acceptance of the stormwater unit and the operation and maintenance requirements. As such, the Engineering Division acknowledges condition #59 of the Conservation Order of Conditions associated with the Notice of Intent for 47 Spy Pond Lane has been met.

Regards,

Wayne A. Chouinard, P.E.
Town Engineer

cc: Conservation Commission (by electronic mail)

SPY POND

FLAG-2
WF-7
SB CTR
WF-6
55.15' BANK FLAGS
42.15'
FLAG-3
WF-5
BORDERING EDGE OF VEGETATED WETLANDS
FLAG-4
S53°10'36"E 13.58'
S39°39'41"E 10.30'
FLAG-5 BANK FLAGS
S22°55'54"E 13.93'
FLAG-6
PATH WALKING
8' WIDE
N51°27'27"E
N49°49'03"E
100 YEAR FLOOD LINE EL.=5.44
25' WETLAND BUFFER
STONE WALL
50' WETLAND BUFFER
S50°52'49"E 39.55'
S50°52'49"E 32.83'
2"MAPLE
PVC FENCE
68.20'
N77°52'07"E 143.64'
N77°31'24"E
N75°52'21"E 99.70'
N77°31'24"E
100' WETLAND BUFFER
SEWER EASEMENT
10' WIDE
PVC FENCE
102.15'
104.47'
45.2'
40.7'
38.2'
10.7'
PATIO
DECK ABOVE/ PATIO BELOW
ROOFED PORCH
16.0'
22.3'
4.5'
CONC. WALK
CONCRETE DRIVEWAY
25.4'
19.4'
62.00'
S12°07'53"E
6"PVC

# LOT 1
8,456±S.F.

2.5 STY. W.F.
NO. 49

GRADES
TOP FOUNDATION=18.4
FIRST FLOOR=19.8
BASEMENT FLOOR=10.7
MIDPOINT=14.6
BASEMENT CEILING=18.5
GARAGE FLOOR=18.2
ROOF PEAK=50.2
MAX. PEAK=50.3
ROOF HEIGHT=34.9
AVERAGE GRADE=15.3

I CERTIFY THAT THE BUILDINGS ARE LOCATED AS SHOWN AND THAT THIS PLOT PLAN IS THE RESULT OF AN INSTRUMENT SURVEY.

JAMES RICHARD KEENAN No. 30787 REGISTERED PROFESSIONAL LAND SURVEYOR COMMONWEALTH OF MASSACHUSETTS

LEGEND
STY. STORY
W.F. WOOD FRAME
CONC. CONCRETE
S.F. SQUARE FEET
H HEIGHT
SHRUB

# SPY POND LANE

ASBUILT PLAN OF LAND
IN
ARLINGTON, MASS.
SCALE: 1 IN. = 10 FT. NOVEMBER 8, 2021

KEENAN SURVEY
8 WINCHESTER PLACE, SUITE 208
WINCHESTER, MASS. 01890
781-729-4213

# Environmental Monitoring: 49 Spy Pond Lane, Arlington, MA

| | |
|---|---|
| Project Name: | **Lot 1, Spy Pond Lane** |
| Project Address: | 49 Spy Pond Lane |
| Project Contractors: | Saver Construction |
| DEP File Number: | 91-0318 |
| Report Prepared By: | Mary Trudeau, CPESC |
| Date of Report/Site Visit: | Site inspection on 7-21, 9- 15, and 10-3, 2022 |

Over the course of 2022, I inspected the condition of the buffer zone restoration area at 49 Spy Pond Lane (aka Lot 1). The woody vegetation was initially planted in 2020, with additional plantings, as well as an invasive plant species management treatments done in 2021 and 2022.


The non native and invasive plant treatments/removal was performed by Zach Navarro, of Essex Horticultural, a specialist in the treatment of non native and invasive plant species. As in 2021, Zach identified several target species within the restoration area, including: Bittersweet Vine (Celastrus orbiculate); Garlic Mustard (Allaria petioliata); and Black Locust (Robinia pseudoacacia), and has performed an second treatment. The treatment represents the second year of a three year program.

In general, the restoration area appears to have thrived. Approximately 40 shrubs, including (20) Low Bush Blueberry (Vaccinium angustifolium) are viable within the planted area, and the surface of the restoration area is stabilized with a mix of herbs, grasses, and forbs. Due to the drought conditions during the summer of 2022, approximately (8) shrubs were replaced, or replanted, within the restoration area. The following photos characterize the area:







As noted above, the landscape architect for the property included (20) Low Bush Blueberry shrubs in the planting plan. These plants are located below the stone

wall.  These small shrubs remain in place, but have been regularly gnawed by rodents (rabbits?). In response, the contractor has added a few larger shrubs within the blueberry patch to add structure to the planting area, and perhaps diversity, in the rodent diets.  These plants are located within the" area below the wall, shown below, and the stumps of the low bush blueberry were left in place:


The landscape plan for the project required the planting of (2) Sycamore trees along the lot line between 47 and 49 (lots 1 and 2) Spy Pond Lane.  In my opinion, the trees failed to survive, and were replaced during 2022.  After consultation with the Arlington Conservation Agent, David Morgan and the current homeowner, the dying Sycamores were replaced with multi stemmed River Birch (Betula nigra).  The following photos show the replacement trees:


**Summary:**

Based on my inspections throughout the 2022 growing season I believe that the restoration area on Lot 1 (49 Spy Pond Lane) is, both, viable and in compliance with the Order of Conditions issued for the project. The 930 square foot restoration area successfully hosts woody shrubs and a wide variety of wetland herbs. Without consideration of the Low Bush Blueberry, the density of planting one shrub per 45 square feet of planting area, is an acceptable threshold for the area. As noted, the surface of the restoration area is densely vegetated with a variety of herbs, grasses and forbs. The project proponent has also continued the second treatment of a three year protocol to manage the invasive and non native plants noted in past reports. In particular, this year the treatment included Bittersweet vine (Celastrus orbiculate); Garlic Mustard (Alliaria petiolate); and Black Locust (Robinia pseudoacacia).

The most substantial growth was seen in the Shadbush, this summer. These shrubs have thrived within the restoration area, and tower over the other woody plants, as shown in the background of this photo:

As noted in past reports, the abundant fruit from the mulberry tree overhanging the replication area continues to draw wildlife, as does the thicket created by the new plantings within the unmowed restoration area. I have seen numerous ducks; chipmunks, rabbits, squirrels and songbirds in the replication area. As it is one of the few thickets along this section of Bank, it appears to be a successful refuge for local wildlife seeking water, food and cover.

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Mary Trudeau, Wetlands Consultant
December 28, 2022

# Environmental Monitoring: 47 Spy Pond Lane, Arlington, MA

| | |
|---|---|
| Project Name: | **Lot 1, Spy Pond Lane** |
| Project Address: | 49 Spy Pond Lane |
| Project Contractors: | Saver Construction |
| DEP File Number: | 91-0318 |
| Report Prepared By: | Mary Trudeau, CPESC |
| Date of Report/Site Visit: | Site inspection on November 12, 2021 |

On November 12, 2021, I inspected the condition of the buffer zone restoration area at 49 Spy Pond Lane (aka Lot 1). The woody vegetation was initially planted in 2020, with additional plantings, as well as an invasive plant species management treatment done in 2021.


The non native and invasive plant treatments/removal was performed by Zach Navarro, of Essex Horticultural, a specialist in the treatment of non native and invasive plant species. Zach identified several target species within the restoration area, including: Bittersweet Vine (Celastrus orbiculate); Garlic Mustard (Allaria petioliata); and Black Locust (Robinia pseudoacacia), and has performed an initial treatment. The treatment represents the first year of a three year program.

In general, the restoration area appears to have thrived. Approximately 40 shrubs, including (20) Low Bush Blueberry (Vaccinium angustifolium) are viable within the planted area, and the surface of the restoration area is stabilized with a mix of herbs, grasses, and forbs. The following photos characterize the area:





As noted above, the landscape architect for the property included (20) Low Bush Blueberry shrubs in the planting plan. These plants are located below the stone wall. As the leaves have fallen from these small plants, they did not photograph well, but appeared viable at this November inspection. These plants are located within the recently “raked” area below the wall, shown below::


I have done an inventory of the woody vegetation found within the buffer zone restoration area. The plant materials consist of the following:

(3) Amelanchier canadensis – Shadbush
(3) Cornus amomum – Silky Dogwood
(5) Hamamelis virginiana – Witch Hazel
(5) Clethra alnifolia – Sweet Pepperbush
(3) Viburnum recognitum – Northern Arrowwood
(1) Acer negundo – Box Elder (indigenous)
(20) Vaccinium angustifolia – Low Bush Blueberry

The buffer zone restoration area is located between the Bank of Spy Pond, and a hand laid stone wall, set at the 25 foot buffer zone. The stone wall was constructed without mortar, and it was apparent that animals have begun to utilize the wall for habitat. The following photo shows a burrow/crevice within a portion of the wall, where gravel has been pulled out of the wall and left at the new hole:


The landscape plan for the project required the planting of (2) Sycamore trees along the lot line between 47 and 49 (lots 1 and 2) Spy Pond Lane. In my opinion, the trees should be replaced. Failure to water was an issue in 2020, causing systemic failure within both trees. While the trees have managed to survive, I am not convinced that they are viable in the long term. The following photos show the condition of these trees, and the irregular leafing pattern that has resulted from the vascular damage that occurred in 2020.


The Order of Conditions allowed the construction of a single, dock at the Bank of Spy Pond (subject to a Waterways License) and this has been maintained over the past year. . I did note that a small birch (Betula populifolia) had been cut at the junction of the dock and the Bank, but as the stump is intact, the Bank remains stable. I spoke with the resident at 47 Spy Pond Lane, and she noted that the tree had suffered significant damage during a wind event in the fall of 2021, and that the cutting was done to remove the remaining tree trunk:



**Summary:**

Based on my inspection on November 12, as well as the occasional visits done over the past few months, I believe that the restoration area on Lot 1 (49 Spy Pond Lane) is, both, viable and in compliance with the Order of Conditions issued for the project. The 930 square foot restoration area successfully hosts (20) woody shrubs, plus an additional (20) ground cover shrubs (the Low Bush Blueberry). Without consideration of the Low Bush Blueberry, the density of planting one shrub per 45 square feet of planting area, is an acceptable threshold for the area. The surface of the restoration area is densely vegetated with a variety of herbs, grasses and forbs. The project proponent has also initiated the first of treatment of a three year protocol to manage the invasive and non native plants noted in past reports. In particular, this year the treatment included Bittersweet vine (Celastrus orbiculate); Garlic Mustard (Alliaria petiolate); and Black Locust (Robinia pseudoacacia).

As noted in past reports, the abundant fruit from the mulberry tree overhanging the replication area is drawing wildlife, as is the thicket created by the new plantings within the unmowed restoration area. I have seen numerous ducks; chipmunks, rabbits, squirrels and songbirds in the replication area. As it is one of the few thickets along this section of Bank, it appears to be a successful refuge for local wildlife seeking water, food and cover.

My only comment on the plantings required in the Order of Conditions concerns the (2) Sycamores planted along the property line between Lots 1 and 2. I believe that the trees should have been replaced, as they are not exhibiting appropriate foliage and leafing patterns. Branching at the top of each tree has failed to survive, and it is not clear to me that these trees meet the requirements of health and vigor.

Mary Trudeau

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Mary Trudeau, Wetlands Consultant
November 15, 2021

Seaver Construction

January 21, 2022

215 Lexington Street

Woburn, Mass. 01801

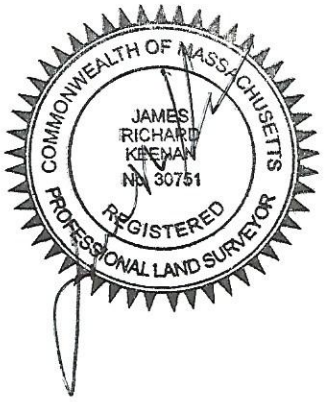
RE Lot 2 Spy Pond Lane Arlington

This letter is prepared to certify the as built conditions at Lot 2. The conditions comply with the Order of Conditions recorded on 5-21-20 in Book 74724 Page 411, Mass DEP # 091-0317.

The stone retaining wall that was originally proposed to cross over the lot line onto Lot 1 stops at the sewer easement and does not encroach upon it.

The house location, driveway, and free standing wall have been constructed according to the approved site plan. Although I cannot certify as to species, the plantings have been completed.

James R. Keenan PLS



EJB Designs, LLC Site Planning & Landscape Architecture
P.O. Box 739 - Mansfield, MA 02048 – P: 617-877-6805 – Email: ejb-designs@comcast.net

October 3, 2021

Mr. Tim Powderly
Seaver Construction, Inc.
215 Lexington Street
Woburn, MA 01801

Re: 47 Spy Pond Lane Plantings – Certificate of Compliance Request

Dear Mr. Powderly:

I am providing this letter of approval for the substantial completion of the Planting Plan dated November 7, 2018, Revised June 11, 2018, for residential property located at 47 Spy Pond Road in regard to the DEP Filing and Order of Conditions # 091-0138 and request for the Certificate of Compliance from the Arlington Conservation Commission. The DEP Form 8A has also been included for you to reference. My observations are listed below from my site visit on September 7, 2021.

1. All plants are thriving and are healthy.
2. Due to nursery availability, plant sizes and quantities vary from the plant schedule but appear to meet the design intent of the approved plans. I have provided a detail list of what has been provide vs. the plants specified on the planting schedule. I believe the heights and quantities provided do balance out to substantially meet the requirements of the plan.
3. The Low Bush Blueberry has been shifted from along the edge of water to in front of the stone wall.
4. Images of the plantings are attached.

| Plant | Spec'd Qty. | Planted Qty. | Spec'd Height | Planted Height |
|---|---|---|---|---|
| Sweet Pepperbush (Clethra) | 10 | 8 | 3'-4' | 3'-4' |
| Arrowood Viburnum | 10 | 7 | 3'-4' | 3'-4' |
| Silky Dogwood | 10 | 14 | 3'-4' | 3'-7' |
| Witch Hazel | 5 | 8 | 6'-8' | 3'-5' |
| Shadbush/Serviceberry | 3 | 4 | 4'-6' | 5'-6' |
| Lowbush Blueberry | 30 | 21 | 12" high | 6"-8" |
| Sycamore | 2 | 2 | 2 ½" Caliper | 2 ½" Caliper |

5. Various wild Roses are overgrowing some plants on the south side and should be contained as needed to help maintain the health of the new plants.
6. Weekly watering (up to 2x/week, equal to 1" of rainfall minimum) shall continue through end of October and commencing in spring of 2022 and throughout the one-year guarantee period.

Please forward this letter along with the Form 8A to the Conservation Commission for final approval.

Regards,

Erik Bednarek

Erik J. Bednarek PLA, #1508 CLARB

617-877-6805

Low Bush Blueberry

**Massachusetts Department of Environmental Protection**
Bureau of Resource Protection - Wetlands

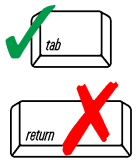
# WPA Form 8A – Request for Certificate of Compliance

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:
091-0318
Provided by DEP

## A. Project Information

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.




1. This request is being made by:

Erik Bednarek
Name

P.O. BOx 139
Mailing Address

| Mansfield | MA | 02048 |
|---|---|---|
| City/Town | State | Zip Code |

617-877-6805
Phone Number

2. This request is in reference to work regulated by a final Order of Conditions issued to:

Seaver Construction / Scott Seaver
Applicant

| September 14, 2016 | 091-0138 |
|---|---|
| Dated | DEP File Number |

Upon completion of the work authorized in an Order of Conditions, the property owner must request a Certificate of Compliance from the issuing authority stating that the work or portion of the work has been satisfactorily completed.

3. The project site is located at:

| 47 Spy Pond Lane (Lot1/Lot A) | Arlington |
|---|---|
| Street Address | City/Town |
| 12-4-2 | |
| Assessors Map/Plat Number | Parcel/Lot Number |

4. The final Order of Conditions was recorded at the Registry of Deeds for:

47 Spy Pond Lane (Lot1/Lot A)
Property Owner (if different)

| Middlesex South | 73606 | 227 |
|---|---|---|
| County | Book | Page |

Certificate (if registered land)

5. This request is for certification that (check one):

☒ the work regulated by the above-referenced Order of Conditions has been satisfactorily completed.

☐ the following portions of the work regulated by the above-referenced Order of Conditions have been satisfactorily completed (use additional paper if necessary).

☐ the above-referenced Order of Conditions has lapsed and is therefore no longer valid, and the work regulated by it was never started.

## A. Project Information (cont.)

6. Did the Order of Conditions for this project, or the portion of the project subject to this request, contain an approval of any plans stamped by a registered professional engineer, architect, landscape architect, or land surveyor?

   ☒ Yes — If yes, attach a written statement by such a professional certifying substantial compliance with the plans and describing what deviation, if any, exists from the plans approved in the Order.

   ☐ No

## B. Submittal Requirements

Requests for Certificates of Compliance should be directed to the issuing authority that issued the final Order of Conditions (OOC). If the project received an OOC from the Conservation Commission, submit this request to that Commission. If the project was issued a Superseding Order of Conditions or was the subject of an Adjudicatory Hearing Final Decision, submit this request to the appropriate DEP Regional Office (see http://www.mass.gov/eea/agencies/massdep/about/contacts/find-the-massdep-regional-office-for-your-city-or-town.html).

SEE DETAIL

SPY POND

POND ELEV=2.0 (AT TIME OF TEST PITS)

FLAG-1

FLAG-2 S57°10'24"E

CONCRETE AND BITUMINOUS BANK

WETLAND RESTORATION AREA 278±S.F.

WF-7 SB CTR

WF-6

FLAG-3

42.15'

35.15'

BANK FLAGS

BORDERING EDGE OF VEGETATED WETLANDS

12" FILTREXX SOXX

BOUCHER FAMILY TRUST
BK. 31315 PG. 438
PAR 012.0-0004-0002.0

N49°49'03"E

CHAIN LINK FENCE

PROPOSED SILTFENCE 12" FILTREXX SOXX

FLAG-4

EL.=5.44

FLOOD LINE

8' WIDE WALKING PATH

20' SETBACK

DRIP EDGE

PROPOSED 12"HIGH FREE STANDING STONE WALL (NO MORTAR)

LIMIT OF WORK

25'WETLAND BUFFER

N51°27'21"E 68.20'

BENJAMIN A. FERBER & AIMEE K. DONOFRIO
BK. 58512 PG. 357
PAR 012.0-0004-0003.0

PROPOSED RELOCATED DOCK

DOCK

7.00'

PROPOSED ROOF DRAIN SYSTEM A 2 ROWS - 2 CHAMBERS PER ROW BOTTOM OF STONE ELEV.=7.0

S50°52'49"E 29.55'

EXISTING SEWER

S50°52'49"E 82.83'

132.46'

50'WETLAND BUFFER

10' SETBACK

SMH

LOT 2
8,784±S.F.

CONC. PAD TO BE REMOVED

LOT 1
- BOUCHER FAMILY TRUST
BK. 31315 PG. 438
PAR 012.0-0004-0002.0

N75°52'21"E

DECK 8.00'

8.00' 4.24' 5.75' 4.24'

100'WETLAND BUFFER

PROPOSED RETAINING WALL 12 15

N77°31'24"E

PROPOSED SEWER 16

55.83'

PROPOSED HOUSE

15.17'

2.83'

21.00'

16.88'

N65°24'16"E

CONC. DRIVEWAY

FER

CONC. RETAINING WALL 17

EASEMENT

104.47'

10' WIDE SEWER

CONC. RETAINING WALL 18

25' SETBACK

16.00'

22.00'

4.50'

ROOFED PORCH

19

14.3'

PERMEABLE PROPOSED DRIVEWAY

STOCK PILE AREA

WALKWAY

PROPOSED WATER

YEWS

102.15'

CONC. RETAINING WALL

EXISTING SEWER

72.69'

62.00'

31.00'

69.00'

S12°07'53"E

PROPOSED STONE APRON (4"-6" MINUS STONE)

CONC. CURB

EDGE OF PAVEMENT

SBDH

SMH EL=17.06

EXISTING WATER

EXISTING SEWER

WV

PETER M. MUSIAL & MONIKA MUSIAL-SIWEK
BK. 59763 PG. 282
PAR 012.0-0004-0001.A

AVGERAGE GRADE
19+19+11+12=61
61/4=15.25

SPY POND LANE

# DETAIL

1"=4'

| NO. | SYMBOL | SPECIES | HEIGHT | SIZE |
|---|---|---|---|---|
| (10) | | = SWEET PEPPERBUSH (CLETHRA ALNIFOLIA) | 3'-4'HIGH | #5C |
| (10) | | = ARROWWOOD (VIBURNUM RECOGNITUM) | 3'-4'HIGH | #5C |
| (10) | | = SILKY DOGWOOD (CORNUS AMOMUM) | 3'-4'HIGH | #5C |
| (5) | | = WITCH HAZEL (HAMAMELIS VIRGINIANA) | 6'-8'HIGH | #5C |
| (3) | | = SHADBUSH (AMELANCHIER CANADENSE) | 4'-6'HIGH | #5C |
| (30) | | = LOWBUSH BLUEBERRY (VACCINIUM ANGUSTIFOLIA) | 12"HIGH | #4C |

END ELEVATION

LIMIT OF WORK (SEE PLANS)

UNDISTURBED AREA

DISTURBED AREA

SEDIMENT FILTERMITT

EXISTING SOIL OR PAVEMENT

GRADE

OAK STAKE

OVERLAP TOP VIEW

FILTERMITT ™

RUNOFF FLOW

2 ANCHORS @ 6"

6" MIN. OVERLAP

12"

PROTECTED AREA

WORK AREA

FRONT ELEVATION

6" MIN.

3' MIN.

GRADE

OAK STAKE (TYP.) (1-INCH BY 1-INCH)

8'-0" MAX. SPACING

## EROSION CONTROL DETAIL

N.T.S.

A

SILT FENCE

10'

A

## PLAN VIEW

SILT FENCE

2" X 2" X 3' STAKE

FLOW

EXISTING GROUND

6" MIN.

8" MIN.

## SECTION A-A

## SILT FENCE PLAN

PERMEABLE PAVEMENT DETAIL

PERVIOUS PAVEMENT: 4" OF POROUS ASPHALT

CHOKER COURSE: 4" MINIMUM THICKNESS OF 3/4" UNIFORMLY GRADED CRUSHED STONE

FILTER COURSE: 12" MINIMUM THICKNESS OF SUBBASE (AKA. BANK RUN GRAVEL OR POORLY GRADED SAND) TO PROVIDE ENHANCED FILTRATION AND DELAYED FILTRATION

FILTER BLANKET: INTERMEDIATE SETTING BED: 3" THICKNESS OF 3/8" PEA STONE GRAVEL TO PREVENT MATERIAL FROM ENTERING THE RESERVOIR COURSE

RESERVOIR COURSE: 4" MINIMUM THICKNESS OF 3/4" CRUSHED STONE FOR FROST PROTECTION, 4-6" DIAMETER PERFORATED SUBDRAINS WITH 2" COVER

NATIVE MATERIALS

DRY LAID CONSTRUCTION STONE WALL, PROVIDE 3" PER 12" BATTER ON ALL SIDE OF WALL

JOINTS BETWEEN STONES SHALL BE 3" OR LESS, STAGGER ALL VERTICAL JOINTS 6" OR MORE

FINISH GRADE

PLACE BOTTOM COURSE OF STONES BELOW GRADE ON COMPACTED GRAVEL BORROW

STONES SHALL INCREASE IN SIZE FROM TOP TO BOTTOM

16"-22"

1'-0"

1'-0"

12

30"-32"

## FREE STANDING STONEWALL DETAIL

N.T.S.

COMMONWEALTH OF MASSACHUSETTS
JAMES RICHARD KEENAN
No. 39751
REGISTERED PROFESSIONAL LAND SURVEYOR

I CERTIFY THAT THE BUILDINGS ARE LOCATED AS SHOWN AND THAT THIS PLOT PLAN IS THE RESULT OF AN INSTRUMENT SURVEY.

PROPOSED BASEMENT FLOOR=10.0
MIDPOINT=14.9
BASEMENT CEILING=19.75
PROPOSED FIRST FLOOR=21.0
EXISTING AVERAGE GRADE=15.25
PROPOSED ROOF HEIGHT = 34.75'
PROPOSED PEAK = 50.0
MAX. PEAK = 50.25
PROPOSED GARAGE FLR.=19.0
EXISTING BUILDING COVER= 18.2%
PROPOSED BUILDING COVER= 23.7%
EXISTING IMPERVIOUS = 2442 S.F.
PROPOSED IMPERVIOUS = 2065 S.F.
EXISTING IMPERVIOUS (100'BUFFER)= 298 S.F.
PROPOSED IMPERVIOUS (100'BUFFER)= 210 S.F.
AREA WITHIN 25'BUFFER ZONE=1129 S.F.

NOTES:
1) WATER SERVICE TO BE 1" TYPE "K" COPPER.
2) SEWER SERVICE TO BE 6" PVC.
3) WATER AND SEWER LATERALS SHALL BE 10' APART (min).
4) PROPOSED WATER TO BE CONNECTED TO EXISTING SERVICE.
5) PROPOSED SEWER TO BE CONNECTED TO EXISTING SERVICE.
6) LOT LOCATED IN FLOOD ZONE C. MAP 25017C0419E.
7) LAWN GRASS TO BE REMOVED FROM THE 0 TO 25 FOOT BUFFER ZONE AND THE AREA TOP DRESSED WITH A COMPOSTED LEAF LITTER MATERIAL, APPLIED TO A DEPTH OF 3-4 INCHES ACROSS THE RESTORATION AREA.

PLANTING PLAN
IN
# ARLINGTON, MASS.
SCALE: 1 IN. = 10 FT. MARCH 7, 2019

KEENAN SURVEY
8 WINCHESTER PLACE, SUITE 208
WINCHESTER, MASS. 01890
781-729-4213

ALAN Engineering, L.L.C.
110 Winn Street, Suite 209
Woburn, MA 01801
(781) 287-9789
*alan.eng@verizon.net*

August 25, 2020

Scott Seaver, President
Seaver Construction, Inc.
210 Lexington Street
Woburn, MA 01801

Ref: 47 Spy Pond Lane – Lot 1
Arlington, MA

Dear Mr. Seaver:

On August 21 and 23, 2020 ALAN Engineering observed the installation of the roof drain infiltration system on Lot 1 at 47 Spy Pond Lane in Arlington. The open excavation was inspected on August 21, 2020 and the soil was found to be consistent with the test pit observations. On August 24, 2020 the system installation was inspected. Crushed stone was added to the excavation to achieve the design elevations of the chambers and filter fabric was placed along the sides of the excavation and over the top of the crushed stone. In accordance with the approved design, the system consists of 2 rows of 3 Cultec R-150XLHD chambers for a total of 6 chambers.

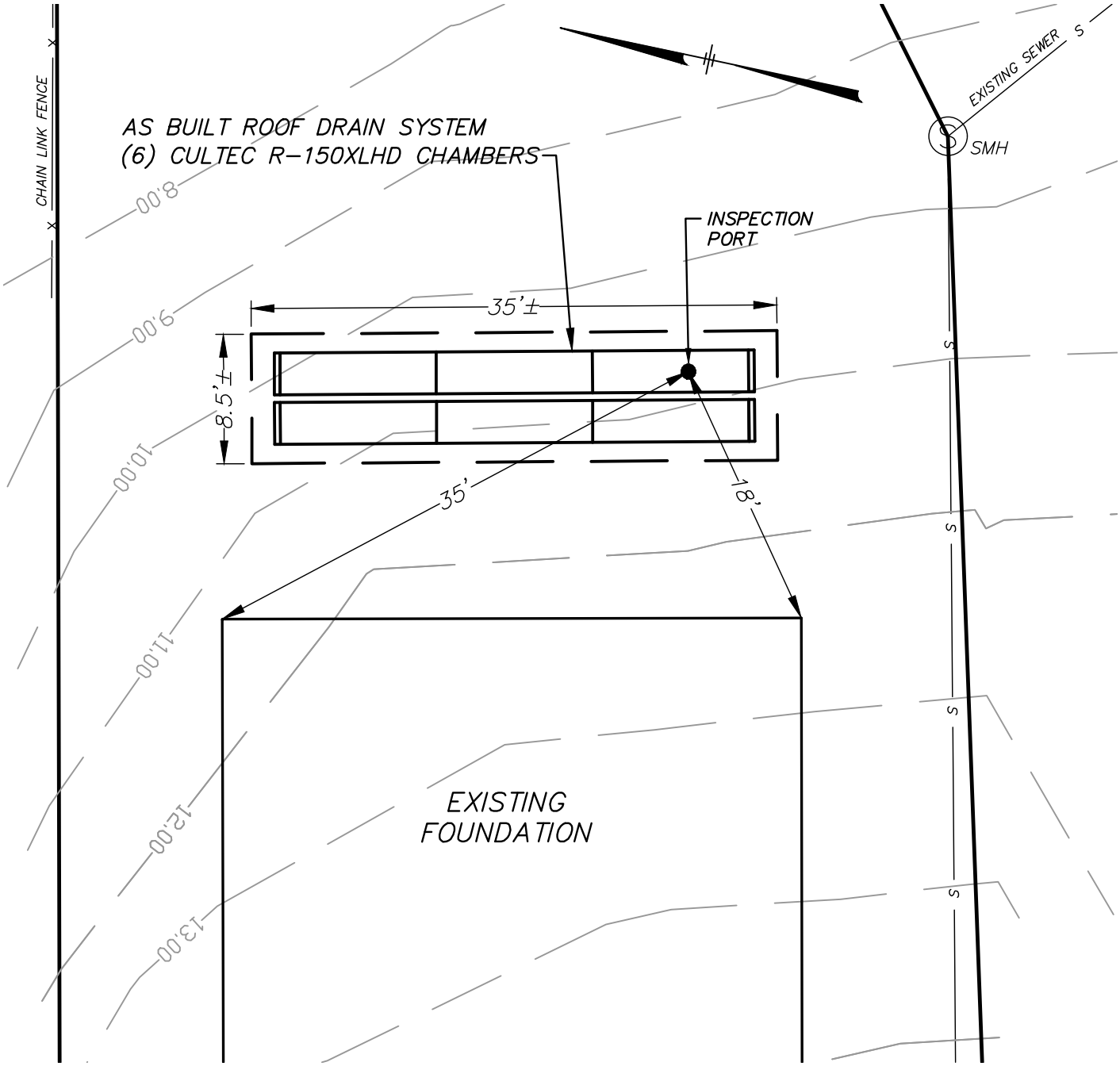
Enclosed is an as built plan of the system which includes Operation and Maintenance requirements.

Very truly yours,
ALAN Engineering, L.L.C.

Mark A. Sleger, P.E.
Manager

COMMONWEALTH OF MASSACHUSETTS
MARK A. SLEGER
No. 34407
REGISTERED PROFESSIONAL ENGINEER

Photo 1
Roof drain infiltration system – Lot 1 at 47 Spy Pond Lane, Arlington, MA




INFILTRATION SYSTEM OPERATION AND MAINTENANCE:

ROOF GUTTERS AND DOWNSPOUTS ARE TO BE KEPT FREE OF LEAF LITTER AND OTHER DEBRIS. THE SYSTEM IS TO BE INSPECTED DURING SIGNIFICANT RAINFALL EVENTS. DISCHARGE THROUGH THE DOWNSPOUT OVERFLOWS MAY INDICATE PIPE CLOGGING OR SYSTEM FAILURE. CLOGGING CAN BE CLEARED WITH EITHER HYDRO-FLUSHING OR MECHANICAL CLEANING. THE SURFACE ABOVE THE SYSTEMS SHALL BE KEPT FREE OF SHRUBS AND WOODY VEGETATION TO PREVENT ROOT DAMAGE TO THE CHAMBERS. THE SYSTEM IS TO BE INSPECTED ANNUALLY FOR SEDIMENT ACCUMULATION.



| | | | |
|---|---|---|---|
| AS BUILT ROOF DRAIN INFILTRATION SYSTEM<br>47 SPY POND LANE (LOT 1)<br>ARLINGTON, MA | ALAN ENGINEERING, L.L.C.<br>110 WINN STREET, SUITE 209<br>WOBURN, MA 01801 | JOB NO. 1140<br>AUGUST 25, 2020<br>SCALE: 1" = 10' | DWG NO<br>SHEET 1 of 1 |

# SETTLEMENT AGREEMENT

This Settlement Agreement ("Agreement") is made by and among Seaver Construction ("Seaver"), a domestic corporation with a principal office at 215 Lexington Street, Woburn, Massachusetts, and the Town of Arlington Conservation Commission ("Conservation Commission"), with an address of Arlington Town Hall, 730 Massachusetts Avenue, Arlington, Massachusetts. (Collectively, the Conservation Commission and Seaver are referred to as the "Parties").

## RECITALS

WHEREAS, Seaver has a contract to purchase the property at 47 Spy Pond Lane, Arlington, Massachusetts ("Locus");

WHEREAS, on November 21, 2017, Seaver filed with the Conservation Commission two Notices of Intent ("2017 NOI") for the Locus to construct two houses on the Locus subdivided into two lots, Lot 1 and Lot 2 (the "Project");

WHEREAS, on February 20, 2018, the Conservation Commission issued Orders of Conditions ("Orders") pursuant to the Town of Arlington Wetlands Protection Bylaw ("Bylaw");

WHEREAS, in the Orders, the Conservation Commission denied a permit for the proposed work on each lot, determining that the project did not meet the standards of the Bylaw and the Commission's regulations promulgated thereunder;

WHEREAS, Seaver subsequently requested judicial review of the Order in Seaver v. Town of Arlington Conservation Commission, Middlesex Superior Court Civil Action No. 1881CV01106 ("Lawsuit");

WHEREAS, prior to the filing of the Lawsuit, the Massachusetts Department of Environmental Protection ("MassDEP") issued a Superseding Order of Conditions ("SOC"), approving the project pursuant to the WPA only;

WHEREAS, because the parties have conducted settlement discussions and, with the assent of both parties, the Conservation Commission has not been served and as such, the record of the administrative proceedings before it was not assembled and the Commission's Answer has not been filed in the Lawsuit;

WHEREAS, the Parties now wish to settle the issues and claims in dispute with respect to the Lawsuit only;

WHEREAS, the purpose of this Agreement is to end the Lawsuit and allow Seaver to build the Project under Orders to be issued by the Conservation Commission under the Bylaw,

THEREFORE, in consideration of the mutual covenants herein contained and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. The Parties agree to stay the Lawsuit, including any outstanding service of process and/or allowing the Conservation Commission to further postpone its filing of the administrative record, to enable Seaver to file with the Commission a Notice of Intent under the Bylaw only for each proposed Lot and for the Commission to hold a hearing over one or more days on said Notices of Intent and consider issuance of an Order of Conditions under the Bylaw.
2. During the pendency of the stay, each Party's respective position concerning the disputed Orders of denial under the Bylaw shall remain open to challenge in the

Lawsuit until an Order has issued for each proposed Lot and becomes final for the purposes of the Wetland Protection Act.

3. Seaver shall prepare and submit two Notices of Intent, one for each proposed lot, with an amended site and landscaping plans with notations ("Amended Plans"). Seaver shall not have to pay a filing fee but shall otherwise comply with the Commission's requirements for filing a Notice of Intent. The Amended Plans shall be consistent with the September 6, 2018 discussions of Parties of the plans "Proposed Site Plan in Arlington Mass" prepared by Keenan Survey of Winchester, dated August 16, 2016, revised August 16, 2018, ("Exhibit 1"), which were originally prepared and submitted as part of the prior NOIs that resulted in the Commission's denial. During said discussions, Seaver agrees to the following additional project elements: a dry-laid or dry-stacked stone wall (without mortar) of approximately 2 to 2.5 feet in height at the 25-foot buffer zone line to protect the 25-foot mitigation area and beginning two feet from each outer property line on each lot and ending at the shared access route to Spy Pond; maintain the stormwater infiltration systems for the previously proposed houses despite the reduction in roof area with the agreed-to houses; on Lot 1, denote location of the two sycamore trees to be planted to replace the sycamore tree that will be lost; apply forthwith to the MassDEP Waterways Program and exert best efforts to obtain a Waterways License to allow the dock on Lot 1 to be moved and become a shared dock located at the boundary of Lot 1 and 2 in lieu of individual docks on Lot 1 and Lot 2; revise mitigation planting plan on Lot 1 to reflect relocated dock, mitigation plantings of two sycamore trees, and the stone wall.

4. The Parties agree that the Conservation Commission shall schedule the hearing on the Notices of Intent by the next scheduled hearing date and that from the date of closure of the public hearing (whether that be on the same day the hearing is opened or a later date if the hearing is continued), the Conservation Commission shall have twenty-one (21) days to issue a decision as provided in the Bylaw, unless Seaver agrees to extend the date of issuance of a written decision.

5. The Parties agree that Seaver shall at his own cost notify abutters and place a legal notice in the Arlington Advocate of the filing of his Notices of Intent and the Commission's public hearing on each.

6. The Parties agree that the Commission may impose special condition(s) in any Orders approving the Project that are consistent with standard and special conditions imposed on other similar projects and consistent with the notations the Parties make on the Exhibit 1, to require mitigation plantings described in the notations on the Exhibit 1 plan.

7. The Parties agree that the settlement contemplated herein is conditional:

   a. If the Conservation Commission issues two Orders of Conditions approval that are consistent with this Agreement, the Parties agree to execute and file a Stipulation of Dismissal in the Lawsuit, with prejudice and without costs or attorney fees, each party waiving its respective rights of appeal;

   b. If the Conservation Commission issues a Denial Order of Conditions in response to either NOI, the Parties agree that Seaver has all rights to file appeals under the Bylaw, to challenge said Denial Order(s) of Conditions; and that in the event of a suit brought in Court to challenge the new decision under

the Bylaw, the Parties shall seek to join it with the pending Lawsuit and, under such circumstances, the Conservation Commission will thereafter file the administrative record of both of the proceedings before it and the briefing schedule shall be governed by Superior Court Standing Order 1-96.

c. No Party shall be responsible or liable for damages, costs, or attorney fees in the event of any dispute, controversy, matter or claim arising out of, related to, or in connection with this Agreement, including but not limited to the enforcement of this Agreement, whether in contract, quasi-contract, tort or otherwise.

8. Each party agrees that this Agreement and any Order(s) approving the Project shall not be cited as precedent by any of the Parties in any proceeding or forum.

9. The Parties each acknowledge and agree that they have negotiated and executed this Agreement of their own free will and with the benefit of advice from legal counsel. Each of the signatories hereto also acknowledges that it has read and understands all of the terms and conditions of the Agreement.

10. The undersigned signatories do hereby represent and warrant that they are duly authorized to enter into, execute and deliver this Agreement.

11. Each term of this Agreement is contractual and not merely a recital.

12. The language of all parts of this Agreement shall in all cases be construed as a whole, according to its fair meaning, and not strictly for or against any of the parties. This Agreement shall be governed and construed in accordance with the laws of the Commonwealth of Massachusetts.

13. This Agreement shall be binding on the Parties and their respective legal representatives, successors (including successors in title), agents, servants, employees, principals, managers, officials, officers, and assigns.

14. The Parties each acknowledge and agree that this Agreement contains their complete agreement with respect to the subject matter hereof and supersedes all prior and contemporaneous oral and written agreements and discussions, and that this Agreement shall not be modified in any way except by a writing signed by all Parties.

15. The failure by either party to enforce any provision of this Agreement will not constitute a waiver of future enforcement of that or any other provision.

16. In the event any part of this Agreement is deemed unenforceable for any reason, the remaining provisions of this Agreement shall remain in full force and effect.

17. The Parties will execute all such further and additional documents as shall be reasonable, convenient, necessary or desirable to carry out the provisions of this Agreement.

18. This Agreement may be executed in any number of counterparts each of which counterparts, when executed and delivered, shall be deemed to be an original, and all of which counterparts, taken together, shall constitute but one and the same instrument.

**SIGNED** under seal by the respective parties with an effective date of _____, 2018.

SEAVER Construction Inc.

By: SCOTT SEAVER
Its: PRESIDENT
Dated: 9-19-18

COMMONWEALTH OF MASSACHUSETTS

On this 19th day of September, 2018, before me, the undersigned notary public, Scott Seaver, personally appeared, proved to me through satisfactory evidence of identification, which were Drivers license, to be the persons whose names are signed on the preceding or attached document, and acknowledged to me that they signed it voluntarily for its stated purpose as _____.

MARY F. SAWYER
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
June 20, 2019

Mary F. Sawyer, Notary Public
My Commission Expires: June 20, 2019

TOWN OF ARLINGTON CONSERVATION COMMISSION

By:
Dated:

By:
Dated:

By:
Dated:

By:
Dated:

By:
Dated:

By:
Dated:

By:
Dated:

SEAVER, LLC

_____
By:
Its:
Dated:

COMMONWEALTH OF MASSACHUSETTS

On this ___ day of _____, 2018, before me, the undersigned notary public, _____, personally appeared, proved to me through satisfactory evidence of identification, which were _____, to be the persons whose names are signed on the preceding or attached document, and acknowledged to me that they signed it voluntarily for its stated purpose as _____.

_____

_____, Notary Public
My Commission Expires: _____

TOWN OF ARLINGTON CONSERVATION COMMISSION

_____
By: Susan D. Chapnick
Dated: 9/20/18

_____
By: Curtis A. Connors
Dated: 9/20/18

_____
By: Charles Tirone
Dated: 9/20/2018

_____
By: David E White
Dated: 9/20/18

_____
By: Nathaniel Stevens
Dated: 9/20/2018

_____
By:
Dated:

_____
By: Pamela Heidell
Dated: 9/20/2018

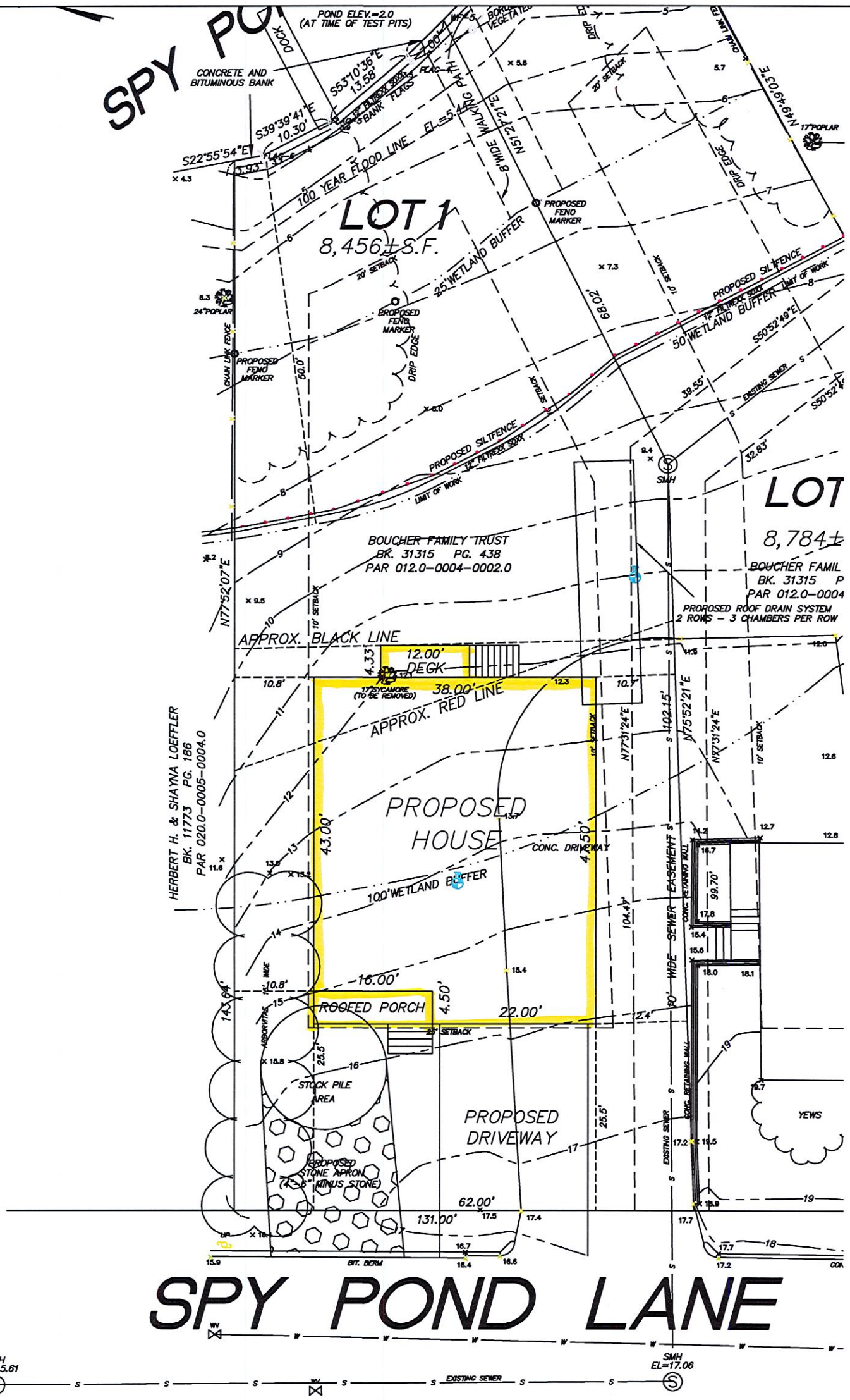
COMMONWEALTH OF MASSACHUSETTS

On this 20th day of September, 2018, before me, the undersigned notary public, Susan Chapnick, Curtis Connors, Charles Tirone, David White, Nathaniel Stevens, Pamela Heidell, personally appeared, proved to me through satisfactory evidence of identification, which were Drivers licenses, to be the persons whose names are signed on the preceding or attached document, and acknowledged to me that they signed it voluntarily for its stated purpose as Members of the Conservation Commission for the Town of Arlington.

Kristen A. DeFrancisco
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
March 28, 2019

Kristen A DeFrancisco Notary Public
My Commission Expires: March 28, 2019

# EXHIBIT 1




PROPOSED SITE PLAN
IN
ARLINGTON, MASS.
SCALE: 1 IN. = 10 FT. AUGUST 16, 2016
REVISED: AUGUST 16, 2018

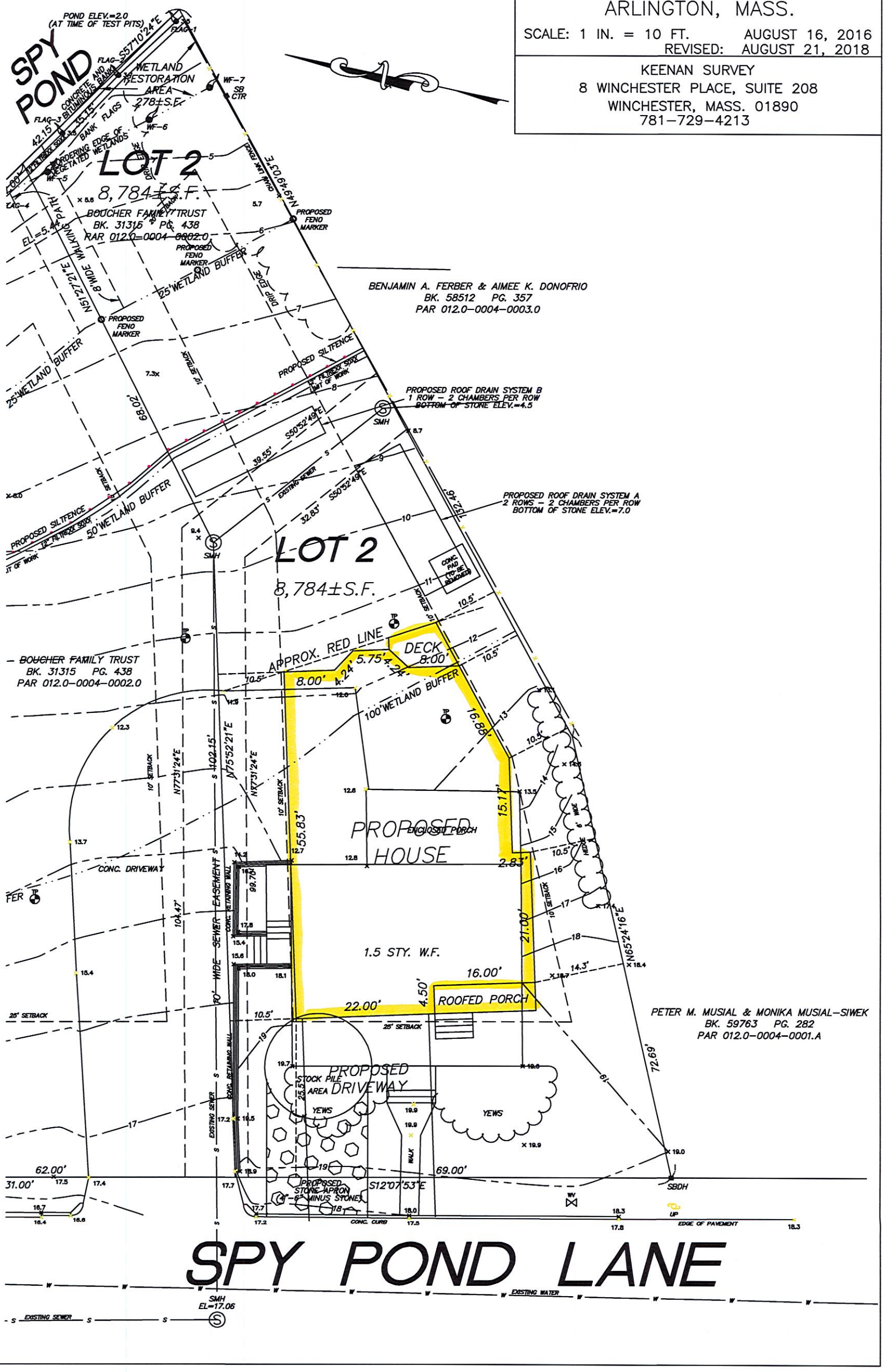
KEENAN SURVEY
8 WINCHESTER PLACE, SUITE 208
WINCHESTER, MASS. 01890
781-729-4213

# Materials for 9/6/18 Executive Session

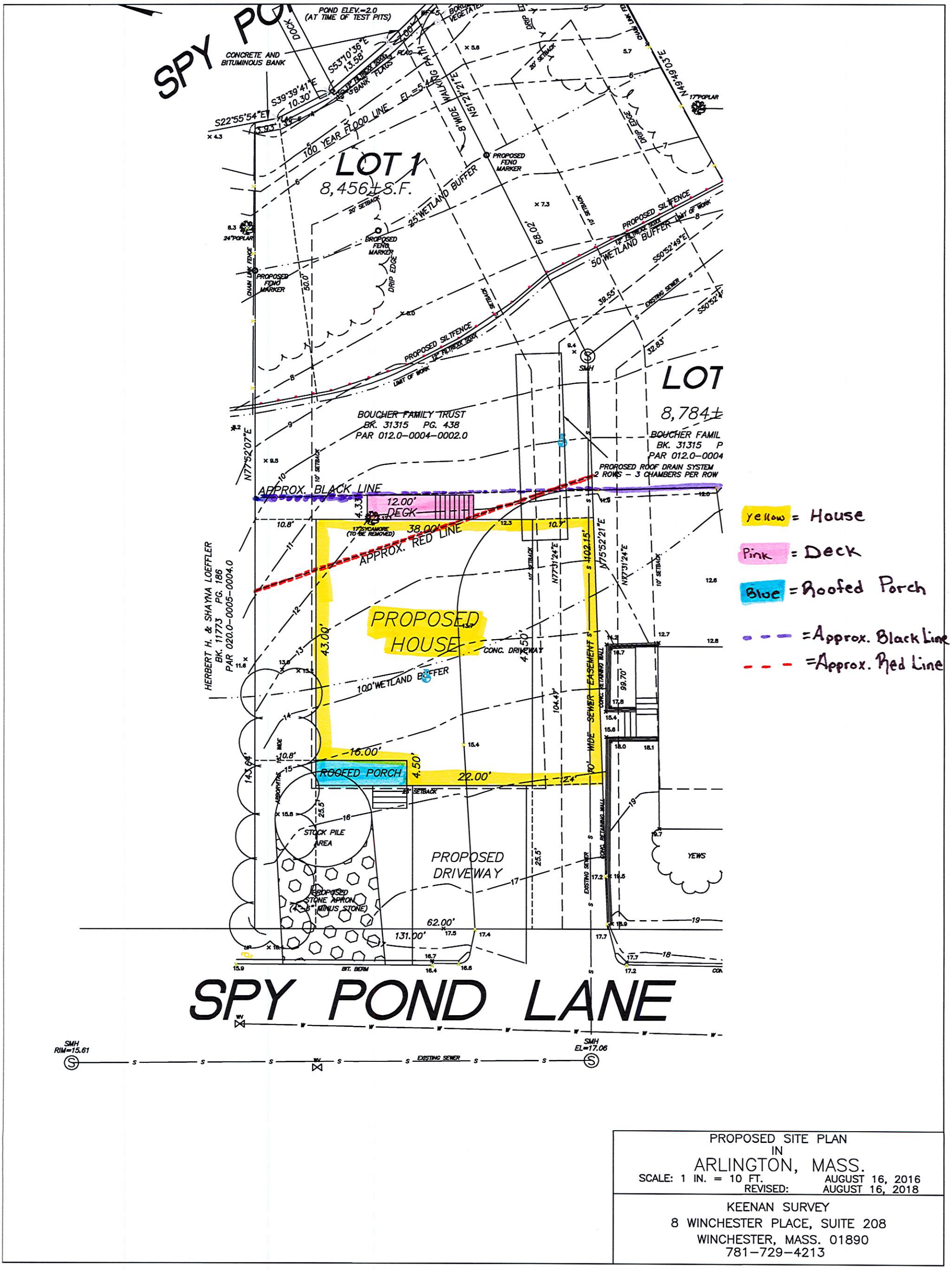
PROPOSED SITE PLAN
IN
ARLINGTON, MASS.

SCALE: 1 IN. = 10 FT. AUGUST 16, 2016
REVISED: AUGUST 21, 2018

KEENAN SURVEY
8 WINCHESTER PLACE, SUITE 208
WINCHESTER, MASS. 01890
781-729-4213



# Materials for 9/6/18 Executive Session

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IN
ARLINGTON, MASS.
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8 WINCHESTER PLACE, SUITE 208
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781-729-4213

# Materials for 9/6/18 Executive Session

PROPOSED SITE PLAN
IN
ARLINGTON, MASS.

SCALE: 1 IN. = 10 FT. AUGUST 16, 2016
REVISED: AUGUST 21, 2018

KEENAN SURVEY
8 WINCHESTER PLACE, SUITE 208
WINCHESTER, MASS. 01890
781-729-4213

SPY POND

POND ELEV.=2.0 (AT TIME OF TEST PITS)

LOT 2
8,784±S.F.

BOUCHER FAMILY TRUST
BK. 31315 PG. 438
PAR 012.0-0004-0002.0

BENJAMIN A. FERBER & AIMEE K. DONOFRIO
BK. 58512 PG. 357
PAR 012.0-0004-0003.0

PETER M. MUSIAL & MONIKA MUSIAL-SIWEK
BK. 59763 PG. 282
PAR 012.0-0004-0001.A

Yellow = House
Pink = Deck
Blue = Roofed Porch
- - - = Approx. Red Line

SPY POND LANE

**Massachusetts Department of Environmental Protection**
Bureau of Resource Protection - Wetlands

# WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File #

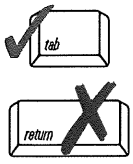
eDEP Transaction #

Arlington
City/Town

## A. General Information

**Please note:** this form has been modified with added space to accommodate the Registry of Deeds Requirements

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.




1. From: Arlington
Conservation Commission

2. This issuance is for (check one): a. ☒ Order of Conditions b. ☐ Amended Order of Conditions

3. To: Applicant:

Scott (a. First Name) | Seaver (b. Last Name)

Seaver Construction
c. Organization

215 Lexington Street
d. Mailing Address

Woburn (e. City/Town) | MA (f. State) | 01801 (g. Zip Code)

4. Property Owner (if different from applicant):

Harold (a. First Name) | Boucher, Trustee (b. Last Name)

Boucher Family Trust
c. Organization

47 Spy Pond Lane
d. Mailing Address

Arlington (e. City/Town) | MA (f. State) | 02474 (g. Zip Code)

5. Project Location:

47 Spy Pond Lane (Lot 1/A) (a. Street Address) | Arlington (b. City/Town)

12-4-2 (c. Assessors Map/Plat Number) | (d. Parcel/Lot Number)

Latitude and Longitude, if known: d m s (d. Latitude) | d m s (e. Longitude)

## A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):

Middlesex South
a. County

b. Certificate Number (if registered land)

31315
c. Book

438
d. Page

7. Dates: 6/11/2019 (a. Date Notice of Intent Filed) 9/5/2019 (b. Date Public Hearing Closed) 9/20/2019 (c. Date of Issuance)

8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):

Prepared Site Plan in Arlington, Mass
a. Plan Title

Keenan Survey of Winchester, MA
b. Prepared By

James Richard Keenan PLS #30751
c. Signed and Stamped by

6/11/2019
d. Final Revision Date

1"=10'
e. Scale

See Attached
f. Additional Plan or Document Title

g. Date

## B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:

a. ☐ Public Water Supply
b. ☐ Land Containing Shellfish
c. ☐ Prevention of Pollution
d. ☐ Private Water Supply
e. ☐ Fisheries
f. ☐ Protection of Wildlife Habitat
g. ☐ Groundwater Supply
h. ☐ Storm Damage Prevention
i. ☐ Flood Control

2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

**Approved** subject to:

a. ☒ the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.

## B. Findings (cont.)

**Denied** because:

b. ☐ the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**

c. ☐ the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**

3. ☐ Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a) _____ a. linear feet

**Inland Resource Area Impacts:** Check all that apply below. (For Approvals Only)

| Resource Area | Proposed Alteration | Permitted Alteration | Proposed Replacement | Permitted Replacement |
|---|---|---|---|---|
| 4. ☐ Bank | a. linear feet | b. linear feet | c. linear feet | d. linear feet |
| 5. ☐ Bordering Vegetated Wetland | a. square feet | b. square feet | c. square feet | d. square feet |
| 6. ☐ Land Under Waterbodies and Waterways | a. square feet | b. square feet | c. square feet | d. square feet |
| | e. c/y dredged | f. c/y dredged | | |
| 7. ☐ Bordering Land Subject to Flooding | a. square feet | b. square feet | c. square feet | d. square feet |
| Cubic Feet Flood Storage | e. cubic feet | f. cubic feet | g. cubic feet | h. cubic feet |
| 8. ☐ Isolated Land Subject to Flooding | a. square feet | b. square feet | | |
| Cubic Feet Flood Storage | c. cubic feet | d. cubic feet | e. cubic feet | f. cubic feet |
| 9. ☐ Riverfront Area | a. total sq. feet | b. total sq. feet | | |
| Sq ft within 100 ft | c. square feet | d. square feet | e. square feet | f. square feet |
| Sq ft between 100-200 ft | g. square feet | h. square feet | i. square feet | j. square feet |

## B. Findings (cont.)

**Coastal Resource Area Impacts:** Check all that apply below. (For Approvals Only)

| | Proposed Alteration | Permitted Alteration | Proposed Replacement | Permitted Replacement |
|---|---|---|---|---|
| 10. ☐ Designated Port Areas | Indicate size under Land Under the Ocean, below | | | |
| 11. ☐ Land Under the Ocean | a. square feet | b. square feet | | |
| | c. c/y dredged | d. c/y dredged | | |
| 12. ☐ Barrier Beaches | Indicate size under Coastal Beaches and/or Coastal Dunes below | | | |
| 13. ☐ Coastal Beaches | a. square feet | b. square feet | c. nourishment cu yd | d. nourishment cu yd |
| 14. ☐ Coastal Dunes | a. square feet | b. square feet | c. nourishment cu yd | d. nourishment cu yd |
| 15. ☐ Coastal Banks | a. linear feet | b. linear feet | | |
| 16. ☐ Rocky Intertidal Shores | a. square feet | b. square feet | | |
| 17. ☐ Salt Marshes | a. square feet | b. square feet | c. square feet | d. square feet |
| 18. ☐ Land Under Salt Ponds | a. square feet | b. square feet | | |
| | c. c/y dredged | d. c/y dredged | | |
| 19. ☐ Land Containing Shellfish | a. square feet | b. square feet | c. square feet | d. square feet |
| 20. ☐ Fish Runs | Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above | | | |
| | a. c/y dredged | b. c/y dredged | | |
| 21. ☐ Land Subject to Coastal Storm Flowage | a. square feet | b. square feet | | |
| 22. ☐ Riverfront Area | a. total sq. feet | b. total sq. feet | | |
| Sq ft within 100 ft | c. square feet | d. square feet | e. square feet | f. square feet |
| Sq ft between 100-200 ft | g. square feet | h. square feet | i. square feet | j. square feet |

## B. Findings (cont.)

* **#23.** If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (BVW) or B.17.c (Salt Marsh) above, please enter the additional amount here.

23. ☐ Restoration/Enhancement *:

a. square feet of BVW | b. square feet of salt marsh

24. ☐ Stream Crossing(s):

a. number of new stream crossings | b. number of replacement stream crossings

## C. General Conditions Under Massachusetts Wetlands Protection Act

**The following conditions are only applicable to Approved projects.**

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
   a. The work is a maintenance dredging project as provided for in the Act; or
   b. The time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
   c. If the work is for a Test Project, this Order of Conditions shall be valid for no more than one year.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order. An Order of Conditions for a Test Project may be extended for one additional year only upon written application by the applicant, subject to the provisions of 310 CMR 10.05(11)(f).
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on _____ unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.

## C. General Conditions Under Massachusetts Wetlands Protection Act

8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.

9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.

10. A sign shall be displayed at the site not less then two square feet or more than three square feet in size bearing the words,

    "Massachusetts Department of Environmental Protection" [or, "MassDEP"]

    "File Number _____"

11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.

12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.

13. The work shall conform to the plans and special conditions referenced in this order.

14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.

15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.

16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.

## C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.

18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.

19. The work associated with this Order (the "Project")
    (1) ☐ is subject to the Massachusetts Stormwater Standards
    (2) ☐ is NOT subject to the Massachusetts Stormwater Standards

    **If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:**

    a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.

    b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:
    *i.* all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
    *ii.* as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
    *iii.* any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;

## C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

*iv.* all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;

*v.* any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement) for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following:

i.) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and

ii.) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.

## C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

g) The responsible party shall:
1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.

h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.

i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.

j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.

k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.

l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

20. For Test Projects subject to 310 CMR 10.05(11), the applicant shall also implement the monitoring plan and the restoration plan submitted with the Notice of Intent. If the conservation commission or Department determines that the Test Project threatens the public health, safety or the environment, the applicant shall implement the removal plan submitted with the Notice of Intent or modify the project as directed by the conservation commission or the Department.

## D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? ☒ Yes ☐ No

2. The Arlington Conservation Commission hereby finds (check one that applies):

   a. ☐ that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

   _____ (1. Municipal Ordinance or Bylaw) _____ (2. Citation)

   Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

   b. ☒ that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

   Arlington Bylaw for Wetlands Protection (1. Municipal Ordinance or Bylaw) Title V, Art 8 (2. Citation)

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

   The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):

   See attached Findings and Conditions

**Massachusetts Department of Environmental Protection**
Bureau of Resource Protection - Wetlands
# WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File #
eDEP Transaction #
Arlington
City/Town

## E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

9/20/2019
1. Date of Issuance

Please indicate the number of members who will sign this form.
This Order must be signed by a majority of the Conservation Commission.

2. Number of Signers

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:

☐ by hand delivery on

Date

☒ by certified mail, return receipt requested, on

9/20/2019
Date

## F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

## G. Recording Information

Prior to commencement of work, this Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Arlington
Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Arlington
Conservation Commission

Please be advised that the Order of Conditions for the Project at:

47 Spy Pond Lane Lot 1/A
Project Location

MassDEP File Number

Has been recorded at the Registry of Deeds of:

Middlesex South
County

31315
Book

438
Page

for:
Property Owner

and has been noted in the chain of title of the affected property in:

Book

Page

In accordance with the Order of Conditions issued on:

9/20/2019
Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant

ARLINGTON CONSERVATION COMMISSION
**APPROVAL** ORDER OF CONDITIONS – 47 SPY POND LANE – LOT 1(A)

DOCUMENTS REVIEWED

1. Notice of Intent for work at 47 Spy Pond Lane (Lot 1/Lot A), Arlington, MA, signed July 9, 2019 by Mary Trudeau; Applicant: Scott Seaver of Seaver Construction, Woburn, MA and Representative: Mary Trudeau of Lexington, MA, and including:
    a. July 8, 2016 letter from Division of Fisheries and Wildlife (2 pages).
    b. Notice of Intent Filing Memorandum: Habitat Value within Adjacent Upland Resource Area (4 pages).
    c. Notice of Intent Filing: Description of Work (6 pages).
    d. Contech Engineered Solutions details for Vortechs 2000 Unit (3 pages).
    e. Notice of Intent Filing - Impact and Alternatives Analysis and Compliance with Bylaw Provisions (8 pages).
    f. Energy Efficient Home Features (2 pages).
    g. Construction Period Stormwater Operation & Maintenance Plan (5 pages).
    h. Post-Construction Construction Stormwater Operation & Maintenance Plan (4 pages).
    i. MassDEP Superseding Order of Conditions/Approval Cover Letter (3 pages).
    j. MassDEP Superseding Order of Conditions/Approval Permit and Special Conditions (15 pages).

<u>Plans</u>

2. "Proposed Site Plan in Arlington, Mass." showing Lot 1 by Keenan Survey of Winchester, MA, scale 1:10, stamped by James Richard Keenan PLS #30751, dated November 7, 2018, revised June 11, 2019.

3. "Planting Plan in Arlington, Mass." showing Lot 1 by Keenan Survey of Winchester, MA, scale 1:10, stamped by James Richard Keenan PLS #30751, dated November 7, 2018, revised June 11, 2019.

4. "Proposed Site Plan in Arlington, Mass." showing Cross Section A-A of Lot 1 by Seaver Construction of Woburn, MA, scale 1:20, dated June 10, 2019, unstamped.

<u>Additional Documents from or on behalf of Applicant</u>

5. Drainage analysis for 47 Spy Pond Lane Lot 1/A, prepared by Alan Engineering, signed by Mark A. Sleger PE #34407, dated June 28, 2016 (16 pages).

6. Additional Information Requests for 47 Spy Pond Lane NOI Hearing on July 11, 2019, including the following documentation:
    i. Pavement Cost Estimate for Watershed Contributing to Vortechnic Unit, prepared by Mary Trudeau, dated June 26, 2019 (1 page).

ii. Roof Drain Details for 47 Spy Pond Lane Lot 1 Arlington MA, prepapred by Alan Engineering, stamped by Mark A. Sleger PE #34407, dated June 25, 2019 (3 pages).

7. Recent Construction Analysis for 47 Spy Pond Lane Lot 1/A, prepared by William F. Copithorne ABR CRS GRI CRS of Sweeney & O'Connell Real Estate, dated July 11, 2019 (5 pages).

8. 47 Spy Pond Lane - Lot 1 Stormwater Review, prepared by Wayne A. Chouinard PE Arlington Town Engineer, dated July 9, 2019 (2 pages).

9. Comparison of the 2016, 2-17, 2018, and 2019 NOIs submitted for 47 Spy Pond Lane Lot 1/A, submitted by Mary Trudeau, not dated (1 page).

10. Email from William F. Copithorne, dated 7/25/2019.

Additional Documents from Members of the Public

11. Letter from Arlington Land Trust, dated 10/3/2018, re-sent 6/20/2019.

12. Email from Kim Carney, dated 6/18/2019.

13. Memo from Town Counsel regarding Alternatives Analysis, dated 6/19/2019.

14. Email from Tamara Chenoweth-Jones, dated 6/20/2019.

15. Email from Robert Noyes, dated 6/20/2019.

16. Email from Jennie Rathbun, dated 6/20/2019.

17. Letter from Felix Wong, dated 6/20/2019.

18. Letter from Elaine Crowder, dated 6/20/2019.

19. Email from Adrienne Landry, dated 6/20/2019.

20. Email from Allysen Palmer Carver, dated 6/20/2019.

21. Email from Aida Khan, dated 6/20/2019

22. Email from Sue Sheffler, dated 6/20/2019.

23. Email from Anne Ellinger, dated 6/20/2019.

24. Email from Victoria Ford, dated 6/20/2019.

25. Email from Amy Cohen, dated 6/20/2019.

26. Email from Alice Trexler, dated 6/21/2019.

27. Email from Lisa Fredman, dated 6/21/2019.

28. Email from Kristin Pennuan, dated 6/24/2019.

29. Email from Ken Lubar, dated 6/24/2019.

30. Email from Bernadette McGonagle, dated 6/24/2019.

31. Letter from Arlington Residents for Reasonable Redevelopment, dated 7/7/2019 (3 pages).

32. Email from Linda Guttman, dated 7/8/2019.

33. Housing analysis letter and photos from Dan Klebanov, dated 7/11/2019.

34. Alternatives analysis letter from Alice Trexler, dated 7/23/2019, revised 7/24/2019.

35. Email from Marjorie Smith, dated 7/24/2019.

36. Email from Diane Krause, dated 7/24/2019.

37. Email from Gary Shostack, dated 7/24/2019.

38. Email Ian Pilarcyzk, dated 7/24/2019.

39. Email from Mark Glasser, dated 7/24/2019.

40. Email from Alice Bennet, dared 7/24/2019.

41. Email from Cynthia Tollen, dated 7/25/2019.

42. Email from Larry Wendell, dated 7/25/2019.

43. Email from Patricia Worden, dated 7/25/2019.

44. Email from Kim Carney, dared 7/25/2019.

45. All relevant documents submitted during the prior hearings and working session(s) are incorporated by reference.

PROCEEDINGS

The Conservation Commission held hearings on the Notice of Intent filed under the Bylaw only on June 20, July 11, and July 25, 2019. The Commission closed the hearing on July 25, 2019, and with the Applicant's waiver of the 21-day period to issue a decision, deliberated on September 5, 2019.

On September 5, 2019, the Commission voted 4-1-1 to approve the Project with conditions under the Arlington Wetlands Protection Bylaw (the "Bylaw").

FINDINGS OF FACT AND LAW
UNDER ARLINGTON WETLANDS PROTECTION BYLAW

1. The Applicant filed a Notice of Intent under the Arlington Bylaw only, and did not file under the Wetlands Protection Act (version June 4, 2015); as such, these findings do not consider the Act or regulations thereunder. The Applicant requested a waiver from the filing fee, but after discussion the Commission voted to deny the request.

2. The Commissions finds that the property at 47 Spy Pond Lane is currently, and has been for 50 or more continuous years, considered and managed as a single parcel with an existing house (vacant due to a fire) and large paved driveway to the north. The property is approximately 18,300 square feet along the shoreline of Spy Pond. Lot 1/A is approximately 8452 square feet. The existing house and all but 789 (491 lot 1+ 298 lot 2) sq. ft. of the existing expansive driveway are beyond 100 feet from Spy Pond so the house and most of the existing driveway are outside of the Commission's jurisdiction.

3. The Applicant represents that the existing historical lot can be divided into two new conforming lots as to zoning. The Applicant thus filed a Notice of Intent (NOI) for each proposed Lot. A separate decision for approval was made for Lot 2(B) in December 2018. Lot 1, also called Lot A, consists of the majority of the existing paved driveway, lawn area, trees and shrubs.

4. 47 Spy Pond Lane slopes downward and toward Spy Pond which borders the property on the north. Resource Areas under the Bylaw on or within 100 feet of the property of Lot 1(A) are: Land Under Water Body, Bordering Land Subject to Flooding, Bank, and Adjacent Upland Resource Area ("AURA").

5. The Commission finds the delineation of the Resource Areas shown on the latest revised plans to be accurate.

6. The Town of Arlington holds a sewer easement through the 47 Spy Pond Lane property in which it has placed a sewer line serving the neighborhood. Its location is shown on several plans.

7. The Commission finds that the Resource Areas on Lot 1(A) are significant to the Resource Area values protected by the Bylaw, as specified in the Regulations for each Resource Area.

8. Spy Pond is an approximately 100-acre pond that is teaming with wildlife and enjoyed by many Arlington residents. Spy Pond Park is one of the most used parks in Arlington. The Arlington Boys and Girls Club also borders the shoreline and uses the Pond for many activities. The Town over the years has funded efforts to reduce and manage invasive aquatic plant species in Spy Pond. Many groups in Arlington advocate for the preservation of Spy Pond and work to improve its water quality, including the Arlington Conservation Commission, Spy Pond Committee, Friends of Spy Pond Park, and the Arlington Land Trust.

9. The Notice of Intent for Lot 1(A) proposes construction of a single-family house and related appurtenances including an underground stormwater infiltration device. The house footprint will be approximately 1,757 square feet with the closest point of the dwelling proposed to be approximately 74.4-feet from the edge of Spy Pond. Work proposed also includes grading and construction of a retaining wall next to the house, the addition of a native planting area within 25-feet from the Pond with an 8-foot wide lawn path through the AURA down to the Pond along the edge of the property. A freestanding field stone unmortared and dry laid wall would be constructed 25-feet from the Pond to surround the proposed 25-foot planting area. The Applicant proposes planting two 3-inch diameter at breast height trees to mitigate the removal of one mature sycamore tree that would have to be removed for construction of the house. The proposal also includes installing an offsite stormwater treatment unit at the corner of Princeton Road and Alfred Road to treatment stormwater from an approximately 1.55 acre watershed area.

10. The Commission finds that the existing impervious surface on the proposed Lot 1(A) is 491 square feet within the AURA and that the project proposed to increase the impervious surface to 879 square feet, a net increase of 388 square feet.

11. The Commission finds that the project meets the standards of the Commission's March 1, 2018 regulations for work in the AURA (Sect. 25).

12. As for work in the AURA, the Commission finds that the Applicant has demonstrated that there are no available or practical alternatives available with less impact to wetlands resource areas. The Applicant has significantly reduced the footprint of the house from the Applicant's first Notice of Intent filed in 2016, its second Notice of Intent

filed in 2017, and its third Notice of Intent filed in 2018. The proposed house is now just over 74.4 feet from the boundary of resource area whereas the 2018 proposed structure would have been only 72.9 feet from the resource area. The distance of the project is approximately74.4 feet from the pond, compared to the current impervious concrete driveway which is 68 feet from the pond. Therefore, impervious surface will be pushed approximately 6 feet back from the pond through the project.

13. The two infiltration chambers will have the capacity for an approximately 30% larger house originally proposed in 2017 even though the house will now be smaller. This added capacity further protects the interests of the Bylaw by providing more than sufficient infiltration of roof runoff, meaning there will be less overland stormwater flow across the property into Spy Pond. The existing house has no stormwater infiltration system.

14. During construction, erosion and sediment controls will serve to protect the AURA and Spy Pond resource areas.

15. The proposed 25-foot wide area of native plantings close to Spy Pond will enhance wildlife habitat by providing more plant material for wildlife foraging, escape cover, over-wintering, and breeding. Currently, this area is lawn. The vegetated buffer will also help to protect the water quality of Spy Pond by slowing down stormwater runoff and bringing greater stability to the bank and areas immediately adjacent to Spy Pond.

16. The Applicant agrees to pursue a waterways license modification to relocate the dock currently on Lot 1(A), to run perpendicular to the property line between Lot 1(A) and Lot 2(B). Moving the dock to the proposed boundary between Lot 1 and Lot 2 as a shared dock will further protect bank of Spy Pond by reducing the number of access points that may result in bank erosion and sediment entering Spy Pond.

17. The Applicant agrees to purchase and install an off-site mitigation stormwater Vortechnics 2000 water quality treatment unit at the intersection of Princeton Road and Alfred Road. The Town will maintain it per conversations with the Town Engineer.

18. The Applicant agrees to install a pervious driveway and walkway although outside of the Conservation Commission's jurisdiction. The Applicant agrees to put in a deed restriction that these surfaces are to remain pervious.

## CONCLUSION

The Commission finds that the proposed work on Lot 1(A) has the potential to individually and/or cumulatively harm the resource area values protected by the Bylaw if not adequately regulated, but can proceed here given that impervious area will be reduced from existing within the AURA, the mitigation provided, and implementation of the conditions specified herein.

Based on the testimony at the public hearing, and review of the application materials and the documents listed above submitted during the public hearing, the Commission concludes that the proposed Project will not alter Resource Areas under the Bylaw, the work as conditioned will not have significant or cumulative effects upon the interests of the Resource Area values of the Arlington Wetlands Bylaw when the conditions imposed are implemented to protect the Resource Area values. With the conditions contained herein, the Project meets the performance standards in the Bylaw Regulations.

For the foregoing reasons, the Commission approves under the Bylaw with the conditions stated herein the applications for work on 47 Spy Pond Lane proposed Lot 1(A).

ADDITIONAL SPECIAL CONDITIONS

In addition to the General Conditions (numbered 1 – 20 above), the Project is subject to the following Additional Special Conditions (under the Bylaw):

**Pre-Construction**

21. Work permitted by this Order and Permit shall conform to the Notice of Intent, the approved plans and documents (listed above), and oral representations (as recorded in hearing minutes) submitted or made by the Applicant and the Applicant's agents or representatives, as well as any plans and other data, information or representations submitted per these Conditions and approved by the Commission.

22. The provisions of this Order and Permit shall apply to and be binding upon the Applicant and Applicant's assignees, tenants, property management company, employees, contractors, and agents.

23. No work shall be started under this Order until: (a) all other required permits or approvals have been obtained and (b) the appeal period of ten (10) business days from the date of issue of this Order has expired without any appeal being filed and (c) this Order has been recorded in the Registry of Deeds. No work shall be started under this Permit until all other necessary permits or approvals have been obtained.

24. The Applicant shall ensure that a copy of this Order of Conditions and Permit for work, with any referenced plans, is available on-site at all times, and that contractors, site managers, foremen, and sub-contractors understand its provisions.

25. Prior to starting work, the Applicant shall submit to the Commission the names and 24-hour phone numbers of project managers or the persons responsible for site work or mitigation.

26. Before work begins, erosion and sediment controls shall be installed at the limits of the work area and as depicted in the approved plans. These will include a silt fence and 12-inch straw or silt wattle around the entire work area (hay bales are not allowed and silt socks are preferred).

27. The contractor shall contact the Conservation Agent (concomm@town.arlington.ma.us ; 781-316-3012) to arrange for a pre-construction meeting with the on-site project manager to walk through the Order of Conditions, confirm the wash out location, and walk the site to confirm the installation and placement of erosion controls prior to the start of any grading or construction work.

28. At least 21 days prior to construction, the Applicant shall submit revised site plans reflecting any additions, additional details, and changes from the June 11, 2019 plans referenced in this Order of Conditions (Plans #2, 3, and 4) to the Commission for approval.

29. At least 21 days prior to the start of construction, the Applicant shall submit a signed agreement between the Town of Arlington and Seaver Construction for the acceptance and maintenance of the off-site stormwater treatment unit.

30. The contractor shall provide written Notice of the work start date to the Conservation Agent 48 hours prior to start of work.

31. The Commission, its employees, and its agents shall have the right of entry onto the site to inspect for compliance with the terms of this Order of Conditions and Permit until a Certificate of Compliance has been issued.

32. The Applicant shall submit an as-built plan, stamped by a Professional Engineer or Registered Land Surveyor, to the Commission within 30 days of the foundation of the home being built.

33. The Applicant shall submit for Conservation Commission approval a restrictive covenant that any pervious surfaces shown on the plan outside of the Commission's jurisdiction shall remain pervious. The restrictive covenant shall be enforceable by the Conservation Commission.

34. The Applicant shall include the Arlington Conservation Commission's Agent on all communication related to the necessary Chapter 91 Licensing in order to move the location of the existing dock to the boundary of Lots 1/A and 2/B.

**Post-Construction**

35. When requesting a Certificate of Compliance for this Order of Conditions, the Applicant must submit a written statement from a Massachusetts professional engineer,

registered land surveyor, or registered landscape architect certifying that the completed work complies with the plans referenced in this Order, or provide an as-built plan and statement describing any differences.

**Dumpsters**

36. All dumpsters must be covered at the end of each work day, and no dumpsters will be allowed overnight within the 100-foot Buffer Zone or Adjacent Upland Resource Areas ("AURA") or other Resource Areas.

**Stockpiling**

37. No uncovered stockpiling of materials shall be permitted overnight within 100 feet of any waterway or water body.

**Erosion**

38. Areas that are disturbed by construction and access activities shall as soon as possible be brought to final grade and reseeded and restabilized, and shall be done so prior to the removal of the erosion control barrier.

**Equipment**

39. No heavy equipment may be stored overnight within 50 feet of the wetland and no refueling or maintenance of machinery shall be allowed within the 100-foot Buffer Zone, and Adjacent Upland Resource Area or within any Resource Area.

40. Arrangements shall be made for any rinsing of tools, equipment, etc. associated with on–site mixing or use of concrete or other materials such that the waste water is disposed of in the concrete wash out station-at least 50 feet from the resource area. In no case may waste water be discharged into or onto Resource Areas on or adjacent to the site. In no case may waste water be placed in storm drains. Any spillage of materials shall be cleaned up promptly.

**Sweeping**

41. Any dirt or debris spilled or tracked onto any paved streets shall be swept up and removed daily.

**Dewatering**

42. Any dewatering operations shall conform to the following:
    (a) Notify the Conservation Commission that dewatering is required.
    (b) Any catch basins, drains, and outfalls to be used in dewatering operations shall be cleaned out before operations begin.
    (c) Any water discharged as part of any dewatering operation shall be passed through filters, on-site settling basins, settling tank trucks, or other devices to ensure that no observable sediments or pollutants are carried into any Resource Area, street, drain or adjacent property.

(d) Measures shall be taken to ensure that no erosion or scouring shall occur on public or private property, or on the banks or bottoms of water bodies, as a result of dewatering operations.
(e) No dewatering shall occur within 50 feet of the pond.

**Plantings**

43. Prior to plant installation, the Applicant shall hire an environmental monitor to oversee the installation of the vegetated buffer plantings installation. The environmental monitor shall be a certified landscape architect or landscape designer. A planting report must be submitted to the Conservation Commission within 10 days of the completion of the plant installation.

44. All vegetated buffer plantings shall be native and be installed and maintained according to the standards of the American Association of Nurserymen (AAN) and be maintained in perpetuity. **This shall be a continuing condition that survives the expiration of the permit and shall be included in any Certificate of Compliance as a continuing condition in perpetuity.**

45. At least 21 days prior to plant installation, the Applicant shall submit an invasive plant management plan to the Conservation Commission. The plan shall focus on invasive plant management for the vegetated buffer area. **The plan's recommendations shall be performed by the Applicant and the recommendations shall be a continuing condition that survives the expiration of the permit and shall be included in any Certificate of Compliance as a continuing condition in perpetuity.**

46. The Applicant shall monitor all approved plantings for a period of three years after plant installation. The Applicant shall maintain 100% survival of all installed plantings after the first and second year of monitoring, and maintain a 90% survival of all installed plantings after the third (final) year of monitoring.

47. The Applicant shall maintain 100% survival of the two approved replacement trees. **This shall be a continuing condition that survives the expiration of the permit and shall be included in any Certificate of Compliance as a continuing condition in perpetuity.**

**Chemicals**

48. To avoid adding excess nitrogen runoff to Spy Pond, the Applicant shall only treat the lawn with slow release nitrogen fertilizer. Application of this fertilizer cannot occur in the summer, or after storm events. Lawn fertilizer shall only be applied twice a year, in spring and fall. No herbicides shall be used to treat invasive or unwanted plants. New plantings shall only be fertilized once, during the initial planting year. No pesticides or rodenticides shall be used to treat pest management issues. **This shall be a continuing condition that survives the expiration of the permit and shall be included in any Certificate of Compliance as a continuing condition in perpetuity.**

**Pervious Surfaces**

49. Pervious surfaces shown on the project plans shall be maintained and not be replaced by impervious surfaces. **This shall be a continuing condition that survives the expiration of the permit and shall be included in any Certificate of Compliance as a continuing condition in perpetuity.**

50. The approved deck shall be constructed to facilitate stormwater infiltration below so that it acts a pervious surface.

51. The unmortared and dry laid stone wall approved to delineate the vegetated buffer area shall remain as unmortared and dry laid. **This shall be a continuing condition that survives the expiration of the permit and shall be included in any Certificate of Compliance as a continuing condition in perpetuity.**

**Stormwater Management**

52. The on-site infiltration system shall be maintained according to the manufacturer best management practices and operations/maintenance plan. The system shall be checked twice a year to ensure compliance with the best management practices and operations/maintenance plan. An annual report shall be submitted to the Conservation Commission and Town Engineer demonstrating that the operation and maintenance of the unit was performed per the manufacturer best management practices. **This shall be a continuing condition that survives the expiration of the permit and shall be included in any Certificate of Compliance as a continuing condition in perpetuity.**

53. The off-site Vortechnics unit shall be purchased and installed by the Applicant at the Applicant's expense. The Town of Arlington shall take over the maintenance of the unit per the conservations documented with the Town Engineer, only when the Town Engineer is satisfied with the function of the unit. The off-site unit shall be installed and operational within 12 months of the issuance of the Order of Conditions.

**Retaining Wall**

54. There shall be no retaining wall over the existing sewer easement. Instead, the property shall be gradually graded to meet the existing contours.

55. At least 21 prior to construction, the Applicant shall submit a revised retaining wall plan to be approved by the Conservation Commission Agent for approval.

**Mt. Gilboa Feasibility Study 90% Draft Presentation.**

**Summary:**
Mt. Gilboa Feasibility Study 90% Draft Presentation.
Martha Lyon Landscape Architecture and Community Circle will present draft findings and recommendations for the Conservation Commission owned property at Mt. Gilboa.

**ATTACHMENTS:**

| | Type | File Name | Description |
|---|---|---|---|
| 🗋 | Reference Material | Mount_Gilboa_Feasibility_Study-DRAFT-6-10-2024.pdf | Mount Gilboa Feasibility Study 90% Draft |
| 🗋 | Reference Material | Mount_Gilboa_Feasibility_Study-FINAL_PRESENTATION-6-20-2024.pdf | Mount Gilboa Feasibility Study 90% Draft Presentation |

# Mount Gilboa Conservation Area Feasibility Study

## Arlington, Massachusetts

*prepared for the*

**Arlington Conservation Commission**
*730 Massachusetts Avenue*
*Arlington, Massachusetts 02476*

*by*

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*The Mount Gilboa Feasibility Study was funded by a grant from the Arlington Community Preservation Committee, Community Preservation Act*

**ACKNOWLEDGEMENTS**
*(forthcoming)*

## INTRODUCTION

*A view of the Boston skyline from one of several outcroppings of igneous rock on Mount Gilboa in fall.*

Covering 10.2-acres in the town's northwest corner, Mount Gilboa is one of the Arlington's most spectacular open spaces. It blankets the town's second-highest point and is cradled on all four sides by the densely-built Crescent Hill residential neighborhood, and from its summit, long views are possible southward to Boston and northwestward to Mount Monadnock. Its rocky forested slopes provide habitat for birds and small mammals, and 0.75 miles of hiking trails thread through its oak, pine, and blueberry-filled woodlands. While open to all of Arlington, Mount Gilboa has been largely embraced by residents of Crescent Hill who treasure the landscape for hiking, bird watching, dog walking, snowshoeing, and commuting to and from the nearby Peirce Elementary School.

Mount Gilboa's designation as conservation land dates to the early 1960s, but the site's history spans centuries. Originally territory of the indigenous Massachusett tribe and the site of dispersed farms, developers spotted the hilly area of northwest Arlington as early as the 1870s as site for a residential neighborhood, and platted the summit and slopes of Mount Gilboa as a subdivision of house lots. All but eighteen lots remained undeveloped until 1924, when a mechanical draftsman from Cambridge, Lester Hayden, purchased the 3.21-acre summit and built the lone residence at 1 Gilboa Road. Hayden owned the property until 1962, when it was sold to a private owner, and within five years the town began acquiring land on Mt. Gilboa with an initial purchase of seven acres to the east, south, and west of the summit. Acquisition of the remaining 3.21 acres and "large house" followed in 1990. Upon securing the acreage, the Arlington Conservation Commission reported that it "hope[d] this prime property [would] some day become an environmental center for the benefit, enjoyment, and environmental education of all Arlington residents."

For 30 years following the final purchase, the town rented the Hayden house as a single-family residence. Lack of sufficient rental income to keep up with repairs led to gradual deterioration of the house, the garage, and the immediate environs. The long, serpentine concrete drive leading from Park Place to the house cracked and spalled, and lack of an adequate system to manage stormwater

resulted in significant runoff spilling into adjacent neighborhood streets. An aged metal sign posted to a tree at the driveway's end conveyed "One Gilboa Road," suggesting that the property is private. By the early 2020s, the town was no longer leasing the house, had placed the building into a semi-mothballed state, and was using the garage for storage. Identifying the need to explore options for its future, the Arlington Conservation Commission applied for and received funding through the town's Community Preservation Act to conduct a study, the findings from which are summarized in this foregoing *Mount Gilboa Feasibility Study* report.


*Mount Gilboa, 10.2 acres in the northwest corner of Arlington, blankets a high point and is the second largest open space in the town.*

## Study Goal and Objectives

The goal of the feasibility study project was **to establish a community vision for Mount Gilboa, to determine a future for the house and garage, to make the property more accessible, and to**

**preserve it as a neighborhood and conservation asset.** Objectives for meeting this goal included (1) engaging Arlington residents in establishing a vision and goals for the property; (2) assessing the opportunities and challenges associated with both the landscape and Hayden house/garage; and (3) developing a plan to achieve the vision and goals, given the physical, regulatory, and monetary constraints associated with the buildings and land.

## Program for Mount Gilboa

At the start of the project, the Arlington Conservation Commission identified the following program of improvements to be considered for Mount Gilboa:

- ***Awareness.*** The process should aim to increase public awareness of the resource, in other words, "put Mount Gilboa on the map."

- ***Access.*** The property needs to be accessible to the general public, which means accommodating some level of parking, and also improving the image of the house and its approach so that it does not seem like private property. The following should be considered:

  ~ Increasing parking (existing zoning allows for "accessory parking")
  ~ Installing improved and more welcoming signage
  ~ Improving connections to the Arlington Reservoir
  ~ Adding bike racks

- ***Trails.*** A trail system exists on the property, but it was never designed or carefully thought out, rather, it evolved through public use. The system needs to be formalized, using a vocabulary of materials and markings. Currently, the trails are maintained and improved by the Conservation Commission with some help from a friends' group. The following should be considered:

  ~ Increasing ADA-compliant access
  ~ Messaging the degree of difficulty of each trail/trail segment
  ~ Connecting to the existing system of town and regional trails
  ~ Enhancing messaging at the kiosk, including upgrades to mapping and/or adding a QR code with links to information about the property, access, and navigation

*A set of wood timber steps, constructed by Boy Scouts, provides access up a steep slope on the east side of Mount Gilboa.*

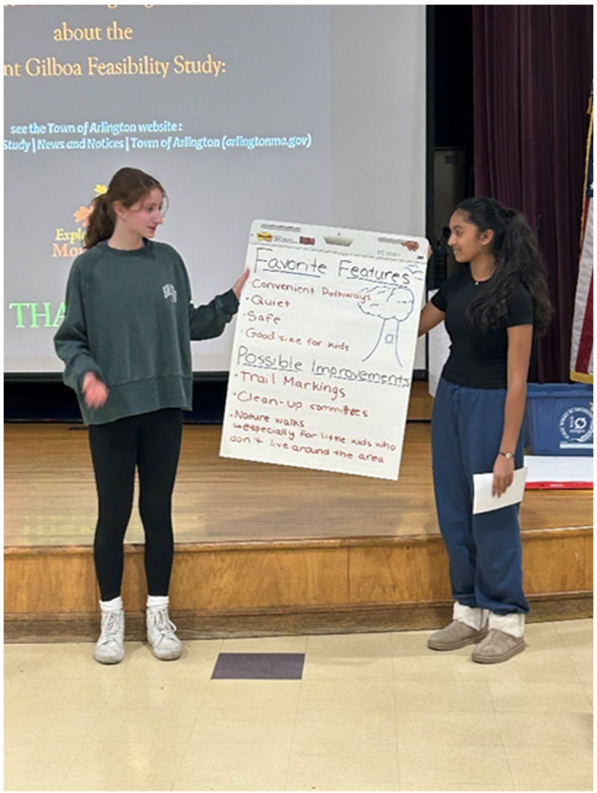
- ***The House.*** The Lester Hayden house never generated much revenue, but possibly could if re-built to accommodate public use. A thoughtful approach to access will need to be considered, regardless of whether the house remains as a public amenity or is removed and replaced with another structure.

## Study Process

To complete the study, the town hired a team of consultants headed by Martha Lyon Landscape Architecture, LLC (MLLA), and assisted by Community Circle (public engagement), Structures North Consulting Engineers, Inc. (structural assessment), and Wendy Frontiero, AIA (architectural history). Working in tandem with the Arlington Conservation Commission and Conservation Agent, the team adhered to the following process:

- ***Programming.*** Team members collaborated with the Arlington Conservation Commission to develop an initial program, or set of expected outcomes, for the study.

- ***Public Engagement.*** Collaborating with the Conservation Commission and Town of Arlington staff, the MLLA team developed a "Public Engagement Plan" that identified the best ways of encouraging participation in the process from Arlington citizens and residents of the Mount Gilboa/Crescent Hill neighborhood. The plan outlined a series of activities designed to gauge public interest and identify users' concerns about the future of Mount Gilboa. Activities included a site walk, public forums, on-line survey, and comments posted via e-mail exchanges, including "Six Word Stories," and "Selfies." Results of public engagement activities were continually uploaded to the town website throughout the study process.




*Arlington High School students share their favorite features of Mount Gilboa at a public forum, held in December of 2023.*

- ***Research and Documentation.*** Team members researched the history of the land and buildings and created revised and new inventory forms for both (Massachusetts Historical Commission Form H-Parks and Landscapes and Form B-Building). Key tasks involved scanning the many deeds associated with land transfers (establishing a chain of

title), interviewing living members of the Hayden family, and documenting the significance of Mount Gilboa in the historical development of the town.

- ***Existing Conditions and Regulatory Assessments.*** After creating a base map based on Geographic Information Systems (GIS) data, team members visited Mount Gilboa during summer, fall, winter, and spring, to inventory existing natural and built site features and analyze their condition, including the Hayden house and garage. The team researched the Federal, state, and local regulations associated with the property, and identified the potential impact of these regulations on future plans.

- ***Concept Development.*** Based on the study program, results of public engagement, and findings of the assessments, the team developed three alternative concepts for future use of Mount Gilboa, and identified the advantages and disadvantages of each.

## Previous Studies and Plans

Several existing studies and plans commissioned by the Town of Arlington provided a base of historical, environmental, and recreation-related information for the Mount Gilboa Feasibility Study. They include:

- ***Mount Gilboa/Crescent Hill Local Historic District Study Report (1991)***. Created in preparation for Local Historic District establishment, this report detailed the history of the Mount Gilboa/Crescent Hill area and included an inventory form for the Lester Hayden house. The bibliography to this report aided the MLLA team in efforts to update the inventory form and create a new form for the Mount Gilboa landscape.

- ***Arlington Public Land Management Plan (2022)***. This plan examined public lands throughout Arlington, mapping each property and identifying natural and cultural resources, recreation activities, and existing maintenance and management practices. The entry for Mount Gilboa noted that due to the property's "excellent distribution of age and successional generation," presence of understory planting, and lack of invasive plant species, it should be "a showcase woodland for the town."

- ***Arlington Invasive Plant Assessment (2023)***. Commissioned by the town to address the proliferation of invasive plant species, this assessment provided a description of Mount Gilboa, and an assessment of invasive plants, noting that while much of the wooded area was intact and in good health, "invasive plants are becoming a stressor." Swallowwort and Japanese knotweed were plants of greatest concern and should be monitored and controlled to preserve the overall high ecological value of the property.

- ***Arlington Open Space and Recreation Plan (2023-2030).*** In addition to providing a comprehensive inventory of open spaces in Arlington, this plan established goals to guide open space planning in the town. These include mitigating the impacts of climate change; meeting local open space needs; encouraging public stewardship; and to the extent feasibly, provide

ADA-compliant access. Each of the plan's goals were considered as part of the *Mount Gilboa Feasibility Study*.

## ARLINGTON VOICES: A Vision for Mount Gilboa

As stated in the Introduction to this report, the goal of the Mount Gilboa Feasibility Study was **to establish a community vision for Mount Gilboa, to determine a future for the house and garage, to make the property more accessible, and to preserve it as a neighborhood and conservation asset.** To fulfill this goal, the consulting team developed a plan for public engagement program aimed at reaching out to and hearing the voices of Arlington residents (especially those living in the surrounding Crescent Hill neighborhood), town officials, and town commission members responsible for regulating, financing, and maintaining the property. Engagement activities included:

- A **neighborhood site walk** held December 2, 2023, with approximately 40 participants
- A **neighborhood forum** held December 2, 2023, with approximately 50 attendees
- A **public forum** held on December 4, 2023, with approximately with approximately 40 attendees
- An **on-line survey** active during the month of January 2024 with 187 respondents

### THOUGHTS ABOUT MOUNT GILBOA

*"It is an unusually wild place in an area that has very little green space."*
– Crescent Hill neighbor

*"Leave no trace on Mt Gilboa"*
- Anonymous resident

*"Keep animals' homes wild, secret, safe."*
- Anonymous resident

*"It's amazing to have a section of "untouched" forest and natural space a few steps away from [my] home."*
– Crescent Hill neighbor

*"Keep it raw and real, not another well-marked park."*
– Crescent Hill neighbor

*"Even though the house is owned by the Town, it has been rented out to private individuals as a residence, and that greatly inhibits general public's use of the very central and dominating space at the top."*
– Crescent Hill neighbor

Throughout the duration of the project, individuals participated through the following means:

- Email thread involving the Mount Gilboa/Crescent Hill Neighborhood
- Email messages from individual stakeholders
- Six-word stories

These activities produced a wide range of concerns about the property, as well as many imaginative ideas for future uses. From this feedback, the team was able to articulate a vision for Mount Gilboa, echoing the majority of participants' voices. Generally speaking, participants reached consensus on

## A VISION FOR MOUNT GILBOA

***Mount Gilboa is…***

*A wooded conservation area, with few alterations to its natural environment, only those that encourage the health of existing plants and animal habitats and promote viability and proliferation of native species*

*Host to a wide range of activities, including exercising, dog walking, safely walking to school, enjoying nature, experiencing quiet contemplation*

*Distinct from the private properties of abutting neighbors to the east, south, and west as marked by clarified property boundaries, done subtly, without compromising the woodland*

*Open to all residents, regardless of physical ability level, made possible by the provision of universal access to a portion of Mount Gilboa without significant intrusion on the natural landscape*

*Litter and dog waste-free as the result of a "carry-in/carry-out" policy adopted by the town to eliminate littering and improperly removed dog waste*

*A commemorative site, honoring Mount Gilboa's history as Indigenous territory, as farmland, as part of a late 19th century subdivision, and as a private home*


*A participant in one of two public forums presents a summary of thoughts provided by a Crescent Hill neighborhood group.*

the future use of the woodland but had divergent opinions about the future of the house. Additional observations, thoughts, and concerns included the following:

**Preserving Mount Gilboa's woodland.** Participants expressed interest in **keeping the wooded area of Mt. Gilboa as a conservation area, that is, as natural as possible.** Often this was expressed as "do nothing." There was significant agreement that removing invasive species and planting additional native species were welcome improvements. Some participants were in favor of a "Friends Group" to help maintain and keep the area clean. Yet others thought that defining the edges and the boundaries between public and private property would be helpful, but they were not in favor of what they saw as "intervention" in the woods themselves. A few participants thought additional amenities such as benches, more information about the trails and rules of conduct at the trailheads, and more poems would be desirable.

*A group of Crescent Hill neighbors assembled at Mount Gilboa in December of 2023 to discuss concerns and share ideas about the property's future.*

**Protecting Mount Gilboa as a neighborhood asset.** **A large number of residents in the fairly dense neighborhood utilize Mt. Gilboa for a number of activities,** often on a daily basis. Some see the wooded area as an extension of their back yards and a shared community space for enjoying nature as well as connecting different parts of the neighborhood. Neighbors enjoy Mt. Gilboa in a number of ways including for bird watching, dog walking, observing nature, walking to and from school, getting lost in the woods and sitting on large rocks to experience the peace and quiet.

**Concern about changing uses of Mount Gilboa.** **The number one concern expressed was a fear that the attention being given to Mt. Gilboa will result in transforming the area into a park rather than a wild place for habitat.** Additional concerns included presence of broken glass, trash and dog waste; growth invasive species; behavior of dogs running off-leash; and unclear boundaries between public and private land.

For a detailed summary of public input, including survey results and presentation materials, refer to *Appendix B* of this report.

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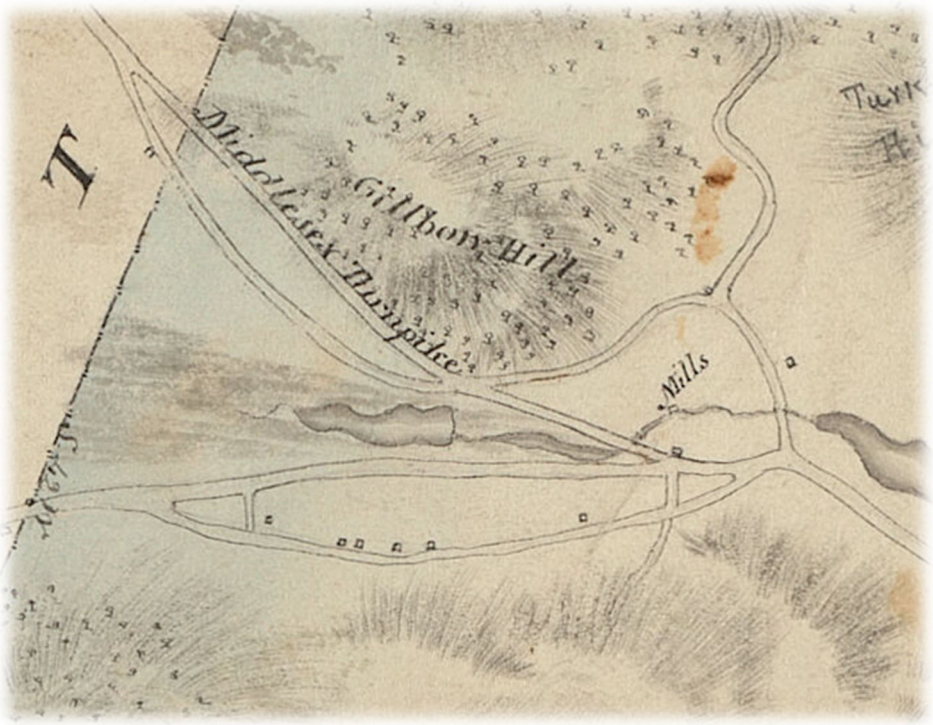
## MOUNT GILBOA YESTERDAY: A Brief History

The following brief history of the development of Mount Gilboa is intended to inform the Town of Arlington about the property's historical, cultural, and architectural significance, one of several factors to consider when deciding future use. Centuries of stories lie embedded in the 10.2 acre landscape, stories that document the town's natural history and cultural heritage. Information for the narrative is derived from Massachusetts Historical Commission inventory forms – Building (Form B) and Landscape (Form H) – prepared as part of the study process. These forms appear in their entirety in *Appendix A.*




*A map of West Cambridge drawn in 1830 labeled Mount Gilboa as "Gillbow Hill." (Boston Public Library, Norman B. Leventhal collection)*

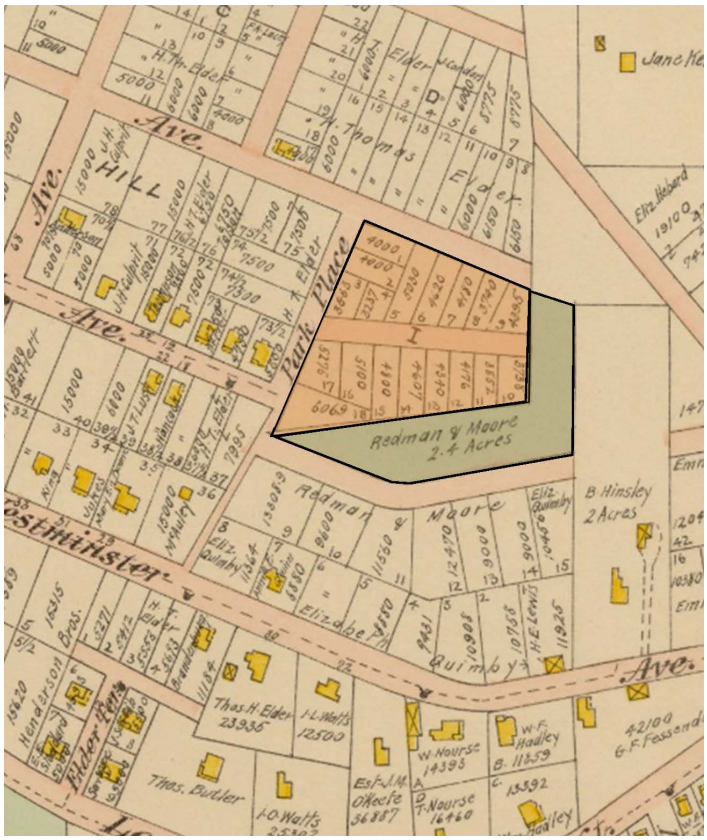
The first known humans to occupy northwest area of Arlington were indigenous people, the Menotomy Indians, members of the Algonquian-speaking Massachusett tribe who likely hunted and gathered around Mount Gilboa and used its rocky promontory as a lookout. During the colonial period, Arlington was known at the time as Menotomy (Algonquian for "swift running water") and later West Cambridge, and much of the land in the northwest corner was farmed. Local tradition holds that after navigating uneven terrain for many miles, farmers of western towns traveling to sell produce at Boston markets would reach the base of Mount Gilboa and know that the most difficult stretch of their journey had ended. The name "Gilboa" is traceable to mid-18th century deeds, and the land on Mount Gilboa appears to have originally been wood lots, accessible by a colonial era way known as Scotland Road.

In 1775, the rocky mass marked the beginning of a skirmish between the British and militias from surrounding towns, as evidenced by a British cannon ball, excavated from the site in 1899. On April 19th, after fighting in Lexington and Concord, 1,800 British troops retreated eastward, reaching Menotomy and the base of Mt. Gilboa. Here, they were confronted by 1,700 Minutemen from thirty towns who had stationed themselves in houses along the route to Boston. The British Commander, Lord Percy, ordered his men to clear every dwelling in the troops' path. The bloody skirmish left 73 British soldiers dead and 174 wounded; at 25 colonists died and ten were wounded. A monument to this event, known as "Foot of the Rocks" (ARL.936) lies below Mt. Gilboa to the south.

*A view of Mount Gilboa from the west, before 1875. Dispersed farms covered much of the northwest part of Arlington. (Date of photograph unknown; collection of the Arlington Historical Society)*

Early to mid-19th century maps of Arlington suggest that the town's northwest corner was largely unsettled during that time, with the exception of a few farms. Dry laid stone walls, constructed of rock gathered during the making of farm fields, remain on Mount Gilboa today. As early as 1872, a speculative development with a grid of streets was platted for land on Mount Gilboa, but lots failed to sell. Two years later, the effort re-emerged to develop the town's northwest corner for housing on land described in the May 23, 1874 edition of the *Arlington Advocate* as some of the most striking in New England:

> "There is probably no more attractive an area within ten miles of Boston than Crescent Hill, as it has been named. It is elevated land, commands an extensive view of the surrounding county in all directions, and has all the advantages of a clear bracing are and a healthy climate. At the southeastern extremity of the estate is a




*A portion of Stadly's map of Arlington, 1900, shows the layout of the 1875 "cooperative plan" – 78 acres with hundreds of building lots, marketed to "working men." The area at the center of the image marked "I" was reserved for a "park." The orange and green areas contain the 3.21 acres purchased by Hayden. (Boston Public Library, Norman B. Leventhal Map Collection)*

beautiful pine grove, in the center of this is Gilboa rock, a relic of the past. From this point an observer can see with the naked eye the blue peaks of Monadnock, and the Berkshire hills, while towards the east the eye feasts on a broad expanse of bright and picturesque scenery, to be equaled in any other part of New England…All of these and more can be seen from Gilboa rock, and on this elevated eminence it is proposed to lay out a park, in an area about two and one-half acres, with an observatory for the use of those who will erect buildings on the lots which will be offered."

The Mechanics Cooperative Association (later the Crescent Hill Improvement Association) spearheaded the development effort, creating 8,000 square foot home lots across 78 acres, and marketing the lots to "working men." For the 2.14 acres (18 lots) covering development's highest point, the association envisioned a park. While it is unclear whether such an open space amenity was created, reference was made to "Crescent Hill Park" in deeds associated with the property as late as the 1910s.

In 1919, Lester Newton Hayden (1884-1962) 18 and 2.14 acres for $1,800. Born in Cambridge in 1884, Hayden left school after the ninth grade, and worked as a mechanical draftsman for the Carr Fastener Company (also in Cambridge). At the time of his purchase, he and his widowed mother, Ellen M. Hayden, were living nearby at 19 Crescent Avenue. He likely had a hand in siting and designing the house, as evidenced by photographs he took of the property in 1923 and an elevation sketch of the house he superimposed on one of the photographs. Custance Brothers, a woodworking firm from Lexington, may have contributed to the house and garage construction, which was largely completed in 1924. The construction drew public interest, as reported in the August, 29 1924 issue of the *Arlington Advocate*,

*Lester Hayden's 1923 sketch of his proposed home atop Mount Gilboa. The summit held few trees at the time. (Hayden family photograph)*

> "Many inquiries have been made relative to the building now being erected on top of Mount Gilboa. The new structure, which is of brick, is visible for miles. Inquiry has brought the information that the building is a modern house being erected by Lester Hayden, for his occupancy."

By spring of 1928, Hayden had added the concrete drive, aptly named Gilboa Road, leading from Crescent Hill Avenue to his house. In 1930, Hayden purchased an additional 1.07 acres abutting the original 2.14 to the west, south, and east, bringing his holdings on Mount Gilboa to 3.21 acres. Building permits issued for a garage (1935) and addition to the house (1938) name Hayden as the owner, architect, and building. Following the death of his mother in 1935, Hayden married Ruby A. Garnier (1902-1996), and the couple lived at 1 Gilboa Road with their two children, William (born ca. 1937) and Martha (born ca. 1941) for the next 27 years.

Hayden family lore holds that Lester hired unemployed men during the Depression to help build the exterior staircase and possibly the driveway entry posts at Park Place, and that he made several features associated with the house, including the bronze lamps and sign at the end of the driveway. In 1934, he married Ruby Garnier and the couple had two children who grew up in the house. At the onset of World War II, Ruby received calls from neighbors saying that "peeping toms" were roaming about the property. The men turned out to be U. S. Army soldiers, setting up searchlights intended to intercept communications between German U-Boats roaming the waters off the coast of Massachusetts and sympathizers on land. The Haydens cleared out their basement, and housed and fed the troops from November of 1941 until March of 1942.


*The Town of Arlington began to purchase land for conservation purposes in 1967, with an initial acquisition of 7.01 acres (five-parcel area in green). A second purchase of the 3.21-acre former Hayden property (three-parcel area in orange) took place in 1990, bringing the total to 10.2 acres.*

Lester Hayden died in July of 1962, and following his death, Ruby moved away to live closer to family members. In November of the same year, Albert F. and Ellen M. Rourke purchased the 3.21-acre Hayden property. Soon afterward, the Town of Arlington began advocating for the purchase of land on Mount Gilboa, again to create a park with trails, picnic areas, and scenic views. The February 9, 1967 edition of the *Arlington Advocate* reported:

> "An article seeking purchase of the proposed park land, now privately owned, is in the upcoming Town Warrant…The newly-formed Arlington Conservation Commission eyed/identified "more than six acres circling the slopes of Mt. Gilboa with magnificent views of downtown Boston…Mt. Gilboa looks today as it did when the Menotomy Indians slipped through the shadows of its trees…Mt. Gilboa is already a fine place for picnics, it is grand with a memorable view and, if publicly owned, could be a haven for students of nature and for scouts. In spite of its steep slopes, a bicycle path could be laid out in a great sweep around the hill and it would

> offer recreation to all Arlington citizens as well as the Heights residents who now enjoy it."

In June of 1967, the town acquired 7.01 acres (5 parcels) bordering the west, south, and east sides of the former Hayden property to be reserved for conservation purposes. Purchase of the additional 3.21 acres, including the Hayden house and garage, took place in October of 1990, at a cost of $675,000 to the town. Creation of the Mount Gilboa/Crescent Hill Local Historic District ensued the following year, and the Lester Hayden House was included as a contributing resource. The town rented the house and made modest upgrades (including a new roof and windows) until 2021 at which time it became vacant. The surrounding acreage, designated as conservation land, became an open space amenity, largely frequented by residents of the Crescent Hill neighborhood. Users created a series of trails through the property, and the Arlington Conservation Commission placed identification signs at several trailhead locations.

## MOUNT GILBOA TODAY: Landscape and Buildings Assessment

The following section provides an assessment of existing landscape and building conditions at Mount Gilboa, and a summary of Federal, state and local regulations governing use of the property. Assessment includes an inventory, analysis of condition, and evaluation, or key findings that will help guide future use decisions.

### Setting and Edges

Located in the Arlington Heights neighborhood in the northwest corner of the town and reaching 312 feet above sea level at its highest elevation, Mount Gilboa is the second highest point next to Turkey Hill (351 feet). Nestled within the densely populated Crescent Hill neighborhood, the 8-parcel, roughly trapezoidal-shaped 10.2-area property is edged by both residential streets and private property back yards. On the north, Park Place defines two thirds of the edge and the back yards of houses on Washington Avenue abut the remaining one third. Residents' rear property lines edge the entire west and south sides, while Alpine, Summit, and Orient Streets rim the east edges. The narrow widths of Park Place, Alpine Street, and Orient Street provide little to no space for visitors to Mount Gilboa to park their vehicles, limiting access to users from outside the neighborhood.

### LANDSCAPE AND BUILDINGS ASSESSMENT SUMMARY: KEY FINDINGS

~ Boundaries between Mount Gilboa land and that of abutting neighbors to the east, south, and west are unmarked. This leads to trespassing from the conservation area on to private land.

~ Long views are possible from several rocky high points on Mount Gilboa. Growth of deciduous trees in the viewsheds obstruct these views.

~ The Conservation Commission has marked four trailheads with signage, one of which contains a kiosk. Neither the signage nor the kiosk is well-maintained, and the kiosk lacks information useful to unfamiliar users of the property.

~ Rock outcroppings and glacial erratic-type boulders appear throughout the property and present challenges to pedestrians attempting to navigate the trail system.

~ The trail system lacks blazes or markers to differentiate level of difficulty.

~ Vehicles may enter the property via the existing serpentine driveway and park near the garage. Conditions of both the driveway and parking area are poor.

~ Oak and pine dominate the flora at Mount Gilboa and the woodland appears healthy. Invasive tree, shrub, vine, and herbaceous perennial patches appear throughout, but are small and manageable.

~ The Hayden house appears structurally stable with signs of deterioration, but access to the structure does not comply with the Americans with Disabilities Act (ADA). The brick and stone exterior stairway is in unstable condition and should be removed and/or rebuilt.

### Topography and Views

Dominated by outcroppings of igneous bedrock, Mount Gilboa's landform ranges in steepness from moderate to severe. Easier terrain covers Mount Gilboa's lower elevations along west, south, and east sides, as well as the north side between Crescent Hill and Madison Avenues. Moving inward from the edges, grades, punctuated by several outcroppings, increase the steepness. The highest point lies near the property's geographic center and holds the Lester Hayden House. From here, long views are possible through the deciduous tree cover across the Town of Arlington and as far away as Boston. Drainage throughout the site corresponds to the slopes, with surface water flowing more rapidly over steeper grades. Scattered among the outcroppings are several depressions which may hold water temporarily but do not classify as wetlands or vernal pools.

### Parking, Entrances, and Circulation

Visitors to Mount Gilboa may enter by vehicle at one location, or on foot at six different spots, four of which are official signed trailheads. The vehicular entrance lies along the north property edge on Park Avenue, opposite the end of Crescent Hill Avenue. Created by Lester Hayden as a driveway into his private home, this concrete-covered route snakes gently up Mount Gilboa's north slope, ending in an asphalt cul-de-sac near the summit. Concrete curbing has been placed along the driveway edges to control stormwater flow, but the large volume of water flowing down the drive exceeds what the curbing system can handle, leading to flooding in the adjacent streets. Pedestrian entrances, or "trailheads," lie along Park Avenue, Alpine Street, Orient Avenue, and Madison Avenue. At each, the Arlington Conservation Commission has placed a green and white wooden sign holding the words "MOUNT GILBOA ARLINGTON CONSERVATION LAND." At the Park Avenue entrance, a wooden kiosk holds chalk and bulletin boards posting trail maps and provides space for visitors to leave thoughts. The trail alignments generally follow the natural contours of the land, with short vertical switch-back segments connecting the longer horizontal segments, and the varied terrain offers a diversity of hiking experiences. The trail rimming the lower elevations of the site contains gentler grades and a well-worn path. As hikers traverse the higher elevations, they must navigate around rock outcrops and boulders and the trails are less well-defined. The entire length of the trail network at Mount Gilboa measures just under 0.75 mile.

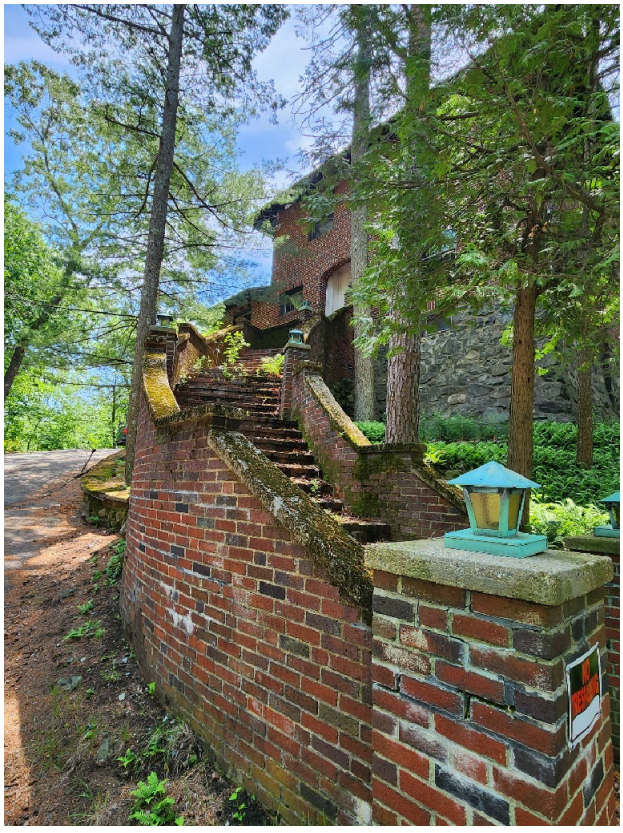

*The only vehicular entrance to Mount Gilboa is the concrete driveway leading to the Hayden house and garage. Its condition is poor, and its edges no longer control the flow of stormwater.*

## Flora

Unmanaged woodland covers much of the 10.2 acres with the dominant tree species being oak (*Quercus spp*.). Stands of white pine (*Pinus strobus*) extend along the base of the western slopes, and to the east of the Hayden house site. Cherry (*Prunus*), cedar (*Juniperus spp.)*, staghorn sumac (*Rhus typhina*) and blueberry (*Vaccinium angustifolium*) appear in smaller quantities throughout the woodlands. Along both sides of the driveway leading to the house and garage, laurel (*Kalmia latifolia*) fills the woodlands, and a mass of fern grows near the north side of the house. English ivy (*Hedera helix*) and periwinkle (*Vinca minor*) have infiltrated the woodlands near the Alpine and Summit Street edges. The property contains a small number of invasive species, growing in patches throughout the site. These include Norway maple (*Acer platanoides*), multiflora rose (*Rosa multiflora*), bush honeysuckle (*Lonicera spp.)* winged euonymous (*Euonymous alatus*), glossy buckthorn (Frangula alnus), Japanese knotweed (*Polygonum cuspidatum*), Asiatic bittersweet (*Celastrus orbiculatus*) swallowwort (*Cynanchum louiseae*), and poison ivy (*Toxicodendron radicans*).

## Buildings

The property's two historic structures, the 1924 Hayden house, and 1935 two-car garage are the property's most prominent features. The Craftsman style two-story house rests at the rocky summit of Mount Gilboa and contains a full basement and unfinished attic under a compound hip roof. A large brick and stone-walled stairway begins at a formal front entrance to the house's first floor, and ascends from the downward-sloping driveway, terminating below basement level. Additions to the square main block of the house extend from the east side (one three-level extension and another one-story) and south side (single-level vestibule). The exterior walls are constructed of fieldstone and brick masonry. The one-story brick-walled, two-bay garage stands to the northeast of the house along the east side of the driveway.



*The brick and stone staircase leading to the front door of the Hayden house has deteriorated and is unsafe for use.*

The consulting team performed a detailed structural assessment of both structures as part of the feasibility study, a complete copy of which appears in *Appendix C* of this report. The team noted that the house showed significant signs of deterioration, including brickwork with eroded mortar joints, loosened and cracked stonework in the foundation, rusted lintels, and chimneys requiring partial or complete reconstruction. Of particular concern was the condition of

the exterior stairway. Brick and stone walls have fragmented and stair treads have deteriorated. As noted in the report, *"the extent and nature of the damage to this stairway is such that it cannot feasibly be saved in place, rather it should be demolished and reconstructed or replaced."* In contrast, aside from a cracked concrete apron in front of the south bay, the garage is in generally stable condition.

### Landscape Details

In addition to the geological features, flora, and discussed above, Mount Gilboa retains several landscape details that are reminders of previous inhabitants and uses. To the east and south of the Hayden house are the lichen-covered remnants of a dry laid fieldstone wall, likely dating to the early 1800s when northwest Arlington was largely farmed. Pyramidal-topped concrete blocks, located at the end of the driveway, mark the entrance to the former Lester Hayden house, and a metal sign bearing the name "Gilboa Road" hangs from a tree nearby. A series of three field stone-supported terraces descends the north slope below the house. Remnants of military-related structures that stood on the site during World War II stand to the east of the house.

*Field stone supported terraces descend the north slope below the Hayden house.*

## MOUNT GILBOA TODAY: Regulatory Assessment

Several existing government laws, regulations, and standards will influence how the land and buildings on Mount Gilboa can be used in the future. Massachusetts General Law protects some or all of the 10.2 acres as conservation land. Arlington's zoning bylaw, and Conservation Commission and Historic Districts Commission regulations impact use of the land and alterations to the Lester Hayden house. Federal guidelines outline accessibility requirements for publicly-owned buildings and outdoor recreation facilities. Definitions and impacts of these laws, regulations, and standards are detailed in *Appendix D* of this report. A summary of findings appears below.

### Massachusetts Laws and Regulations

All of Mt. Gilboa's 10.2 acres (8 parcels) are presumed to be **protected as conservation land by MGL Article 97** and subject to the provisions of the Public Lands Preservation Act (PLPA). A change in use or sale of the land would require a unanimous vote of the Arlington Conservation Commission and Town Meeting, and a two-thirds vote of both branches of the legislature.

### Arlington Bylaws and Regulations

***Zoning.*** Mount Gilboa's location within an Open Space zoning district places limits the use of the property for recreation, cultural, and entertainment activities; proposed alternative uses would require a variance.

***Land Use.*** Use of the 1.795-acre Hayden house and garage property is limited to those uses permitted in Open Space zoning districts, its current use as a single-family residence is considered non-conforming. However, it will remain exempt from Open Space land use restrictions if continued to be used as a single-family residence.

**REGULATORY ASSESSMENT SUMMARY: KEY FINDINGS**

- All of Mount Gilboa's 10.2 acres are **presumed to be protected by MGL Article 97**, as conservation land.
- While the 10.2 acres are zoned as Open Space, the property is **exempt from Open Space land use restrictions** if its use continues to be for a single-family residence.
- Any changes of to the exterior of the house or garage must be approved by the Arlington Historic Districts Commission through the **"certificate of appropriateness"** process. This may limit the town's ability to bring the house into compliance with the Americans with Disabilities Act.
- A proposal to remove the house must be reviewed by the AHDC per the terms of the **Demolition Delay Bylaw.**
- The house, trailheads, and trails do not comply with ADA guidelines, and as a result, **Mount Gilboa is almost completely inaccessible** to persons with physical disabilities.

***Arlington Conservation Commission.*** The Arlington Conservation Commission classifies the 10.2-acre Mount Gilboa area as conservation land and has enacted several regulations to oversee this and other conservation lands in the Town. While these regulations appear on the town's website, they are not listed on the kiosk or signs at Mount Gilboa's trailheads. Without regular monitoring of Mount Gilboa's use by members of the Commission, or the Conservation Land Stewards, violators are difficult to apprehend, and fines are difficult to impose.

***Arlington Historic Districts Commission.*** The Lester Hayden House is one of 104 contributing resources within the Mount Gilboa/Crescent Hill Local Historic District. Modification or alteration to the exterior of the Hayden house and garage must be approved by the Arlington Historic Districts Commission, through the **"certificate of appropriateness"** process. This may prevent removal of exterior features, such as the staircase, and may limit the extent to which the house can achieve ADA compliance. Proposals for demolition of either the house or garage must be reviewed by the AHDC per the terms of the town's **Demolition Delay Bylaw**.

## Federal Laws and Guidelines

**Americans with Disabilities Act (ADA).** The Federal government provides guidelines for access to buildings, trailheads, and trails through the ADA, and currently, none of these features adheres to ADA standards. As a public building, the house does not provide a compliant means of egress (entrances), access to the second floor, or toilet facility. Steep slopes between the garage and house violate acceptable grades between parking and building entrances. A change in use of the house, if permitted, will require significant upgrades to access both to and within the building.

**Accessibility Standards for (Federal) Outdoor Developed Areas.** Arlington's Accessibility Coordinator adheres to the standards/guidelines developed at the Federal level for trail and trailhead development, known as Accessibility Standards for (Federal) Outdoor Developed Areas. The existing trailheads do not contain required information, including trail lengths, surfaces, and grade levels. The surfaces, widths, and gradients of the Mount Gilboa trail system do not meet these standards/guidelines.

## MOUNT GILBOA TOMORROW: General Recommendations and Alternative Concepts for Future Use

This final section of the study provides a set of general recommendations and outlines three alternative concepts for the future use of Mount Gilboa. Each concept offers a different response to the study's goal of **determining a future for the house and garage, making the property more accessible, and preserving it as a neighborhood and conservation asset.** Three sources of information provided ideas for the general recommendations and concepts:

~ **The program for Mount Gilboa**, articulated by the Arlington Conservation Commission and spelled out in the report's *Introduction*

~ **The results of public engagement**, as discussed in the *Arlington Voices* section of this report including input from Crescent Hill neighborhood and other town residents, as well as town officials, board and commission members

~ Conclusions drawn from the *Mount Gilboa Today* section, specifically **existing site conditions, building conditions, and regulatory constraints**

*Remnants of stone farm walls weave through the Mount Gilboa landscape, marking the time when the area was extensively farmed. Each of the proposed concepts will preserve these historic structures.*

For each concept a list of advantages and disadvantages were identified; these should be evaluated against the following criteria:

~ The extent to which the concept keeps the Mount Gilboa **woodland as wild as possible**
~ The extent to which the concept preserves Mount Gilboa as a **neighborhood asset**
~ The extent to which the concept **minimizes the loss or maximizes the commemoration of a historic resource**
~ The extent of **legal and/or regulatory implications** associated with the concept
~ The **financial implications** of the concept

## General Recommendations

The following general recommendations should be included in any future plan for Mount Gilboa.

**Legal Protection.** The purchase of Mount Gilboa's 10.2 acres and eight parcels took place over the course of several decades, and culminated with the final acquisition, 3.21 acres holding the Lester Thayer house and garage, in 1990. Records of these acquisitions, and the town meeting votes to make them, suggest that the entire property may be protected as open space under MGL Article 97, the 1972 act to assure citizens' access clean air and water and freedom from excessive noise. However, only some of the purchases specifically cite Article 97. To confirm protection under this act and/or secure additional protection, the town should (1) obtain a legal determination regarding Article 97 protection for the entire 10.2 acres, and/or (2) place a permanent conservation restriction on the land, to be held by the Arlington Conservation Commission.

**Edges.** As noted in the *Site & Building Assessment* section of this study report, the east, west, and south edges of the 10.2-acre property abut the back yards of neighboring residences. The division between town-owned and private lands lacks definition, and this has led to users of Mount Gilboa trespassing on private property. A delineating feature, such as a series of granite posts or stone cairns, placed at intervals along the property lines, would help clarify the boundaries. Wayfinding signs could provide additional definition (see *Wayfinding and Interpretation*, below).

*A stone cairn is one way of using natural materials to define boundaries. Such a structure could be place at property edges along the east, south and west sides.*

**Trailheads.** As discussed in the *Regulatory Assessment* section, the town's Accessibility Coordinator follows the standards developed at the Federal level for trailheads, and currently Mount Gilboa's trailheads do not meet these standards. At each of the existing three marked trailhead sites, the town should provide a sign, signs, or kiosk with maps and written information detailing:

- ~ Lengths of trails and trail segments
- ~ Types of trail surfaces
- ~ Typical and minimum trail tread width
- ~ Typical and maximum trail grade
- ~ Typical and maximum trail cross slope
- ~ Flora and fauna of Mount Gilboa


*Metal discs bearing the name of the land steward can help direct hikers on trail systems. Color coding on markers can indicate level of trail difficulty.*

**Trails.** Much of the terrain at Mount Gilboa presents challenges to persons with physical disabilities attempting to navigate the existing trail system. The presence of ledge results in steep slopes and glacial erratic-type boulders impeded trail use, and amendments to most of the existing trails to make them accessible would be both costly and invasive to the natural landform. The way to assure universal access to Mount Gilboa is to create a designated trail within the 10.2 acres in an area with the most moderate slopes, and provide HP designated parking spots at the trailhead associated with this trail. On all other trails, a system of blazes would help direct users throughout.

**Land Stewardship.** Long term stewardship of Mount Gilboa as a conservation area will involve both invasive species control and introduction of new and/or native plant species. The town-wide invasive plant assessment completed in 2023 identified several species of invasive plants growing in small quantities on Mount Gilboa. Of particular concern were patches of swallowwort and Japanese knotweed. Future interventions with the Mount Gilboa landscape should include removal and control of these plants. Introduction of new and/or native species should include plants predicted to survive in a warmer and wetter climate.

**Regulation and Disposal of Waste.** Users of Mount Gilboa expressed concern about the amount of trash and dog feces deposited along the network of trails. Currently, rules and policies pertaining to removal of litter and dog waste are not posted at the trailheads, and the town does not provide dog waste bags on the site. Future improvements to Mount Gilboa should include a strategy for minimizing litter and waste by (1) posting rules and policies at the trailheads, (2) providing dog waste bag stations at trailheads, and (3) instituting fines for violating rules.

**Wayfinding and Interpretation.** Currently, Mount Gilboa lacks signage to orient visitors to parking, trailheads, trail lengths and degrees of difficulty, and viewing spots. Opportunity to convey information about property's natural history and significance in the historical development of the town is lost without interpretive signs. Future upgrades to the property should include a sign program to address this missing information as part of efforts to broaden public access to Mount Gilboa.

**Lester Hayden House Commemoration.** If the house and garage are removed, either by relocation or demolition, or the property is subdivided and the house sold to a private owner, the town should install a sign with QR code where visitors can access photographs and information relating to the house's history, thereby preserving its memory.


*An image board, posted to the trailhead kiosk, can include information about flora and fauna on Mount Gilboa.*

**Connections.** Mount Gilboa's setting at the heart of a dense urban neighborhood isolates it from other nearby open lands, including the Arlington Reservoir (to the west), Turkey Hill (to the southeast), and Whipple Hill (to the northeast in Lexington), making it difficult for wildlife to navigate between spaces. The town should attempt to make green connections between Mount Gilboa and the other spaces, by maintaining and enhancing tree lined streets, creating pocket parks, and installing sustainable stormwater management systems (bioswales and rain gardens).

**Student Engagement.** As future plans for Mount Gilboa advance, the town should continue public involvement, reaching out to those who have participated in this study process, as well as those who have not. Included in the latter group are students at the Peirce Elementary School, some of whom use the trail system in their commute to school. The town should organize a site walk for students and follow up with an in-person session where participants can write and/or draw favorite features of Mount Gilboa and display the results in a public forum online. Students of art, history, science, English, physical education, can all take part, as well as those in after-school programs.

**General Public Engagement.** The town can and should continue involving the general public throughout future planning efforts:

~ Develop a **"Where is Mount Gilboa?"** campaign, asking people to identify the property a map posted at the Robbins Library, Town Hall, coffee shops, etc.;
~ Consider **reaching out to Spanish, Portuguese, and Chinese language speakers** as a way of broadening participation;

- Use **trailheads to invite participation**, for example asking users to note wildlife sitings, express feelings about the site, etc.
- Hold a **scavenger hunt on-site**, invite the neighbors, school children, and others to identify leaves, signs of animals, and other features of the natural environment
- **Set up a "station" in the public library** asking for people's thoughts regarding Mt. Gilboa's future in the form of six- word stories
- Place a **temporary "frame" to create a photo opportunity** structure to attract people to the site and take selfies. Engage a local carpenter and/or artist to create the frame
- Issue a **call for poems** to be written using Mount Gilboa as inspiration
- Support the formation and development of a **Friends of Mount Gilboa** group to perform clean-ups, assist in trail building/management, participate in invasive species removal, and design/hold public programs

## Concept A: Wilderness Area

**In this concept, emphasis on the 10.2-acre property is placed on preserving and enhancing its wild characteristics**.

The house, garage, and driveway are removed (demolished or moved off site) and the land upon which they stand is reclaimed for growth of native tree and shrub species. A small parking area is built along the north edge off Park Place, providing space for 3 to 4 vehicles (minimum 2 HP spaces). An ADA-compliant pathway leads from the parking area through the woodland, ending at the level area just below the Mount Gilboa summit. Physical changes include:

- ~ Reclaimed site of house, garage, and driveway, including all asphalt surfaces
- ~ Plantings of native trees and shrubs
- ~ 3-4 car parking area with spaces for vehicles with HP designation
- ~ Pathway leading from parking area to overlook

### WILDERNESS AREA

**ADVANTAGES**

- ~ Eliminates cost of upkeep associated with the house, garage, and driveway
- ~ Reduces impermeable surface of driveway and area around the house and garage
- ~ Establishes Mount Gilboa as a public open space (eliminates confusion over public vs. private ownership)
- ~ Allows for restoration of native flora
- ~ Provides an off-street parking area, including HP designated parking
- ~ Provides a universally-accessible route to a viewing point
- ~ Increases the overall size of wilderness area
- ~ Responds to public's interest in preserving all of Mount Gilboa as wilderness area

**DISADVANTAGES**

- ~ Removes a contributing structure in the Mount Gilboa/Crescent Hill Local Historic District
- ~ Conflicts with public interest in saving and re-purposing the house
- ~ Requires remediation of the house and garage sites, including filling the cavity of the house basement (if structures are demolished, building materials can be used to fill the cavity)
- ~ Requires demolition review and permit by Arlington Historic Districts Commission
- ~ Requires funding from the town to pay for demolition, disposal, and site remediation
- ~ Requires use of a small portion of open space for new parking area and ADA-compliant path
- ~ Requires funding from the town to build these new amenities

## Concept B: Overlook

**This concept focuses on enhancing views from the highest points on Mount Gilboa and providing universal access to those points without removing existing vegetation.**

The house and garage are removed (demolished or moved off site), but the driveway remains and is upgraded with an improved drainage system and new pavement. A small parking area is built in or near the footprint of the garage, and an ADA-compliant pathway leads from the parking area to the level area just below the Mount Gilboa summit. Here, a small overlook shelter provides protection from heat and rain, offers a spot for gathering, and also serves to frame the views. Selective clearing of deciduous trees on Mount Gilboa's south slopes opens long views to Boston. Physical changes include:

- ~ Rebuilt driveway with improved drainage system
- ~ Reclaimed house and garage site
- ~ Diminished asphalt surface
- ~ 3 to 4-car parking area for vehicles with HP designation at former garage site
- ~ ADA-compliant pathway leading from parking to high point
- ~ Overlook structure framing views to south and west
- ~ Selective clearing on south slopes to open views

### OVERLOOK

**ADVANTAGES**

- ~ Eliminates cost of upkeep associated with the house and garage
- ~ Reduces some impermeable surface
- ~ Allows for restoration of native flora
- ~ Provides an off-street parking area, including HP designated parking
- ~ Provides a universally-accessible route to a viewing point
- ~ Provides a structure to protect users from heat and rain, to frame views, and to serve as a gathering space
- ~ Allows spots for benches to be placed along ADA-compliant path
- ~ Provides an opportunity to enhance long views
- ~ Increases the overall size of wilderness area
- ~ Responds to public's interest in preserving all of Mount Gilboa as wilderness area

**DISADVANTAGES**

- ~ Removes a contributing structure in the Mount Gilboa/Crescent Hill Local Historic District
- ~ Conflicts with public interest in saving and re-purposing the house
- ~ Requires remediation of the house and garage sites, including filling the cavity of the house basement (if structures are demolished, building materials can be used to fill the cavity)
- ~ Requires demolition review and permit by Arlington Historic Districts Commission
- ~ Requires funding from the town to pay for demolition, disposal and site remediation associated with the house and garage, and upgrading of the driveway
- ~ Requires financial investment in building parking area, ADA-compliant path, and the overlook structure

## Concept C: Private Home

**In this concept, the house and garage remain and the 1.795-acre parcel upon which they stand is sub-divided into two lots**.

An approximately 0.90-acre lot with frontage on Park Place holds the house, garage, and driveway; a 0.90-acre lot remains part of the larger Mount Gilboa conservation area. The smaller lot (land, house, garage, driveway) is then sold by the town to a private owner, the proceeds from which are used to preserve and enhance the remaining 9.3-acre conservation area (or another public purpose). Upgrades to the buildings and driveway become the responsibility of the new owner. Physical changes include:

- ~ 1.795-acre parcel with house, garage, and driveway subdivided into two parcels
- ~ 0.90 acre holding house, garage, and driveway and is sold to a private owner
- ~ 0.90 acres remains part of larger conservation area

### PRIVATE HOME

**ADVANTAGES**

- ~ Eliminates cost of upkeep associated with the house, garage, driveway, and surrounding landscape
- ~ Earns revenue from the sale to be used for stewardship of the Mount Gilboa conservation area
- ~ Preserves a contributing structure in the Mount Gilboa/Crescent Hill Local Historic District
- ~ Responds to the public's interest in preserving the Lester Thayer house
- ~ Bolsters property tax revenue for the town

**DISADVANTAGES**

- ~ Decreases overall size of the Mount Gilboa conservation area from 10.2 acres to approximately 9.45 acres
- ~ Eliminates public access to the highest points on Mount Gilboa
- ~ Does not provide universal access to high points or overlook sites
- ~ Fails to address the need for off-street parking for visitors
- ~ Lengthens and complicates the unclear boundary between public and private land
- ~ Requires legal transactions and regulatory changes, including (1) re-zoning the 0.75-acres from Open Space to R1; and (2) securing another 0.75-acres of open space elsewhere in Arlington per the terms of the Public Lands Protection Act
- ~ Requires funding from the town to make cosmetic upgrades to the house in order to sell
- ~ Conflicts with public interest in maintaining all of Mount Gilboa as wilderness

Exploring Mount Gilboa

*Mount Gilboa Feasibility Study*
*Arlington, Massachusetts*

# Project Summary

Martha Lyon Landscape Architecture, LLC
Community Circle
Structures North Consulting Engineers, Inc.
Wendy Frontiero, RA

June 20, 2024

Exploring Mount Gilboa

# Project Goal:

To establish a community vision for Mount Gilboa, to determine a future for the house and garage, to make the property more accessible, and to preserve it as a neighborhood and conservation asset

Exploring Mount Gilboa

# Participants

## Town of Arlington Department of Planning & Community Development

David Morgan, Conservation Agent

## Town of Arlington Conservation Commission

Charles Tirone, Chair
Susan Chapnick, Vice Chair
Mike Gildesgame
Dave Kaplan
Brian McBride, Associate
Nathaniel Stevens
Davie White

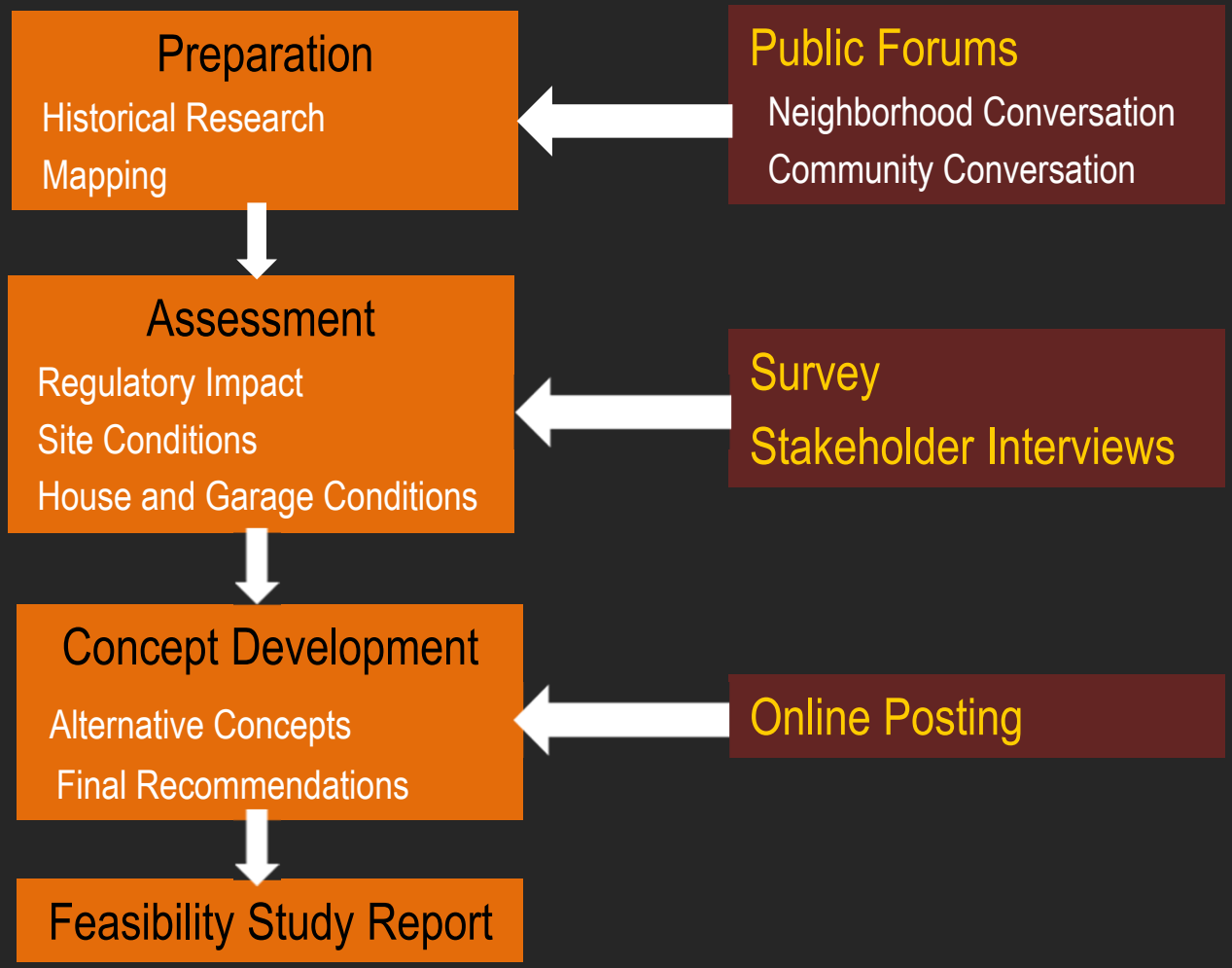
## Consultant Team

Martha Lyon, Martha Lyon Landscape Architecture, LLC
Daphne Politis, Community Circle
John Wathne, PE, Structures North Consulting Engineers, Inc.
Wendy Frontiero, RA

## Residents of Crescent Hill and the Town of Arlington

Exploring Mount Gilboa

# Study Process

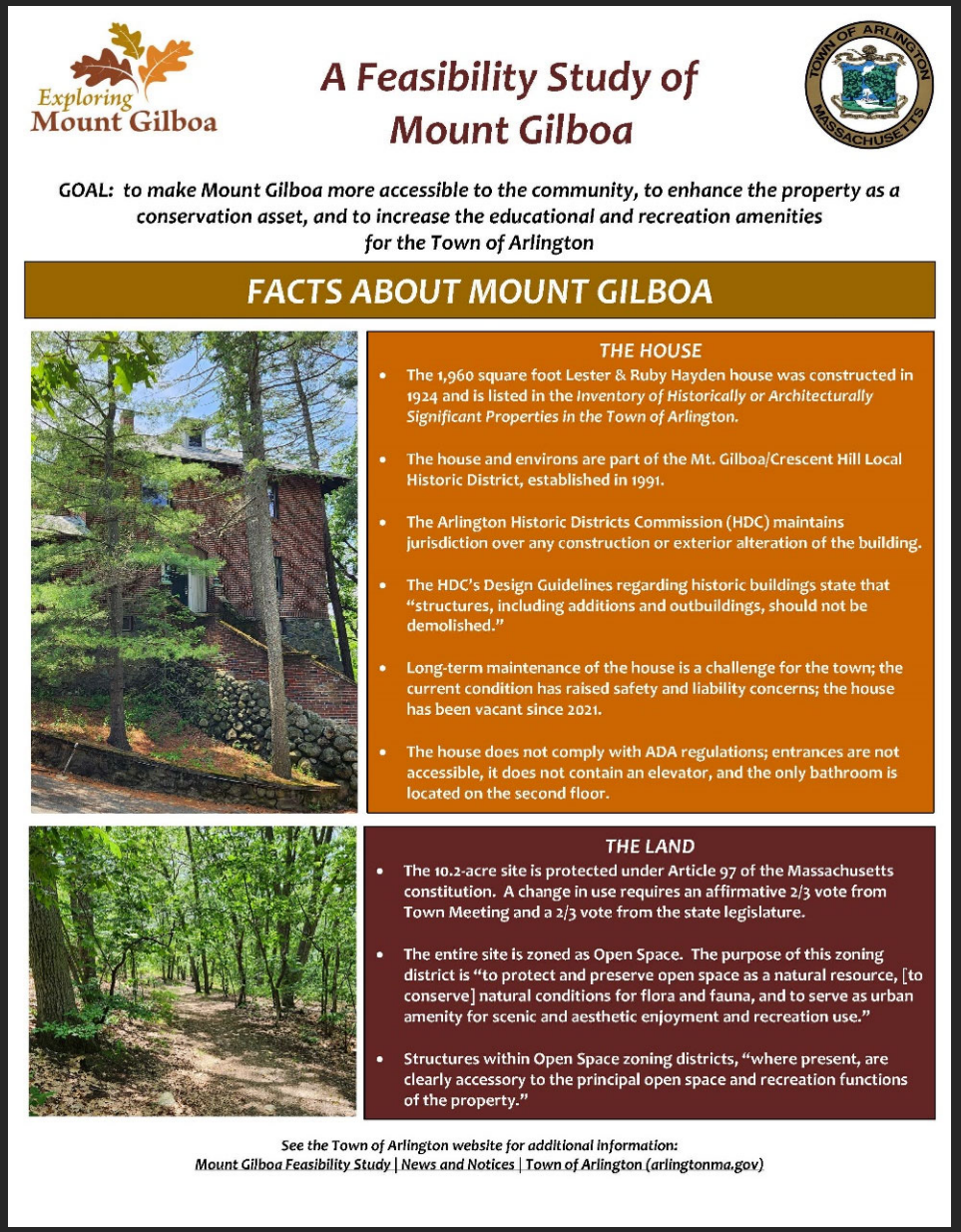


Exploring Mount Gilboa

Mount Gilboa Conservation Area: eight parcels totaling 10.2 acres, one of the largest open spaces managed by the Arlington Conservation Commission


Mount Gilboa Study Area

# Summary of Engagement



Exploring Mount Gilboa

## A Feasibility Study of Mount Gilboa

**GOAL:** *to make Mount Gilboa more accessible to the community, to enhance the property as a conservation asset, and to increase the educational and recreation amenities for the Town of Arlington*

### FACTS ABOUT MOUNT GILBOA



#### THE HOUSE

- The 1,960 square foot Lester & Ruby Hayden house was constructed in 1924 and is listed in the *Inventory of Historically or Architecturally Significant Properties in the Town of Arlington.*
- The house and environs are part of the Mt. Gilboa/Crescent Hill Local Historic District, established in 1991.
- The Arlington Historic Districts Commission (HDC) maintains jurisdiction over any construction or exterior alteration of the building.
- The HDC's Design Guidelines regarding historic buildings state that "structures, including additions and outbuildings, should not be demolished."
- Long-term maintenance of the house is a challenge for the town; the current condition has raised safety and liability concerns; the house has been vacant since 2021.
- The house does not comply with ADA regulations; entrances are not accessible, it does not contain an elevator, and the only bathroom is located on the second floor.



#### THE LAND

- The 10.2-acre site is protected under Article 97 of the Massachusetts constitution. A change in use requires an affirmative 2/3 vote from Town Meeting and a 2/3 vote from the state legislature.
- The entire site is zoned as Open Space. The purpose of this zoning district is "to protect and preserve open space as a natural resource, [to conserve] natural conditions for flora and fauna, and to serve as urban amenity for scenic and aesthetic enjoyment and recreation use."
- Structures within Open Space zoning districts, "where present, are clearly accessory to the principal open space and recreation functions of the property."

*See the Town of Arlington website for additional information:*
*Mount Gilboa Feasibility Study | News and Notices | Town of Arlington (arlingtonma.gov)*

- Site walk with Crescent Hill neighbors (December 2, 2023, 40 participants)
- Interactive forum with Crescent Hill neighbors (December 2, 2023, approximately 50 participants)
- Interactive forum with residents from across Arlington (December 4, 2023, approximately 40 participants)
- Mount Gilboa/Crescent Hill email thread
- Email messages from individuals
- Six-word stories
- On-line survey (January 2024, 187 respondents)

Exploring Mount Gilboa

*"I enjoy just walking, wandering – discovering new paths, areas, views WITHOUT signage to tell me where I am. It's wild and rocky and natural. I like watching huge oak trees grow, lose limbs, decompose over the years without human intervention. Sit on rock ledges, alone."*

~ Crescent Hill neighbor

Exploring Mount Gilboa

# Vision for Mount Gilboa

## Mount Gilboa will be…

- A wooded conservation area, with few alterations to its natural environment, only those that encourage the health of existing plants and animal habitats and promote viability and proliferation of native species
- Host to a wide range of activities, including exercising, dog walking, safely walking to school, enjoying nature, experiencing quiet contemplation
- Distinct from the private properties of abutting neighbors to the east, south, and west as marked by clarified property boundaries, done subtly, without compromising the woodland

Exploring Mount Gilboa

# Vision for Mount Gilboa


## Mount Gilboa will be…

- Open to all residents, regardless of physical ability level, made possible by the provision of universal access to a portion of Mount Gilboa without significant intrusion on the natural landscape
- Litter and dog waste-free as the result of a "carry-in/carry-out" policy adopted by the town to eliminate littering and improperly removed dog waste
- A commemorative site, honoring Mount Gilboa's history as Indigenous territory, as farmland, as part of a late 19th century subdivision, and as a private home

# Key Findings: Landscape & Buildings

- Boundaries between Mount Gilboa land and that of abutting neighbors to the east, south, and west are unmarked.
  - This leads to trespassing from the conservation area onto private land.
- Long views are possible from several rocky high points on Mount Gilboa.
  - Growth of deciduous trees in the viewsheds obstructs these views.

Exploring Mount Gilboa

# Key Findings: Landscape & Buildings

- The Conservation Commission has marked four trailheads with signage, one of which contains a kiosk.
  - Neither the signage nor the kiosk is well-maintained, and the kiosk lacks information useful to unfamiliar users.

- Rock outcroppings and glacial erratic-type boulders appear throughout the property.
  - These present challenges to pedestrians attempting to navigate the trail system.

Exploring Mount Gilboa

# Key Findings: Landscape & Buildings

- The trail system lacks blazes or markers to differentiate level of difficulty.
  - This can result in individuals confronting trail conditions that challenge or exceed their level of physical ability.
- Oak and pine dominate the flora at Mount Gilboa and the woodland appears healthy. Invasive tree, shrub, vine, and herbaceous perennial patches appear throughout.
  - These patches are small and manageable.

Exploring Mount Gilboa

# Key Findings: Landscape & Buildings

- Vehicles may enter the property via the existing serpentine driveway and park near the garage.
  - Conditions of both the driveway and parking area are poor; both the slope and location of the driveway create the sense that the property is private and can discourage use and enjoyment of the woodlands and trails.

Exploring Mount Gilboa

# Key Findings: Landscape & Buildings

- The Hayden house shows multiple signs of deterioration
- Access to the structure does not comply with the Americans with Disabilities Act (ADA)
- The brick and stone exterior stairway is in unstable condition and should be removed and/or rebuilt
- Given the condition of the house and materials used in its construction, relocation may be unachievable and/or may be cost-prohibitive

# Recommendations

- Legal Protection.
- Edges.
- Trailheads.

Exploring Mount Gilboa

# Recommendations

- Trails.
- Land Stewardship.
- Regulation and Disposal of Waste.

Exploring Mount Gibbs

# Recommendations

- Wayfinding and Interpretation.
  - Lester Hayden House.
  - Connections.

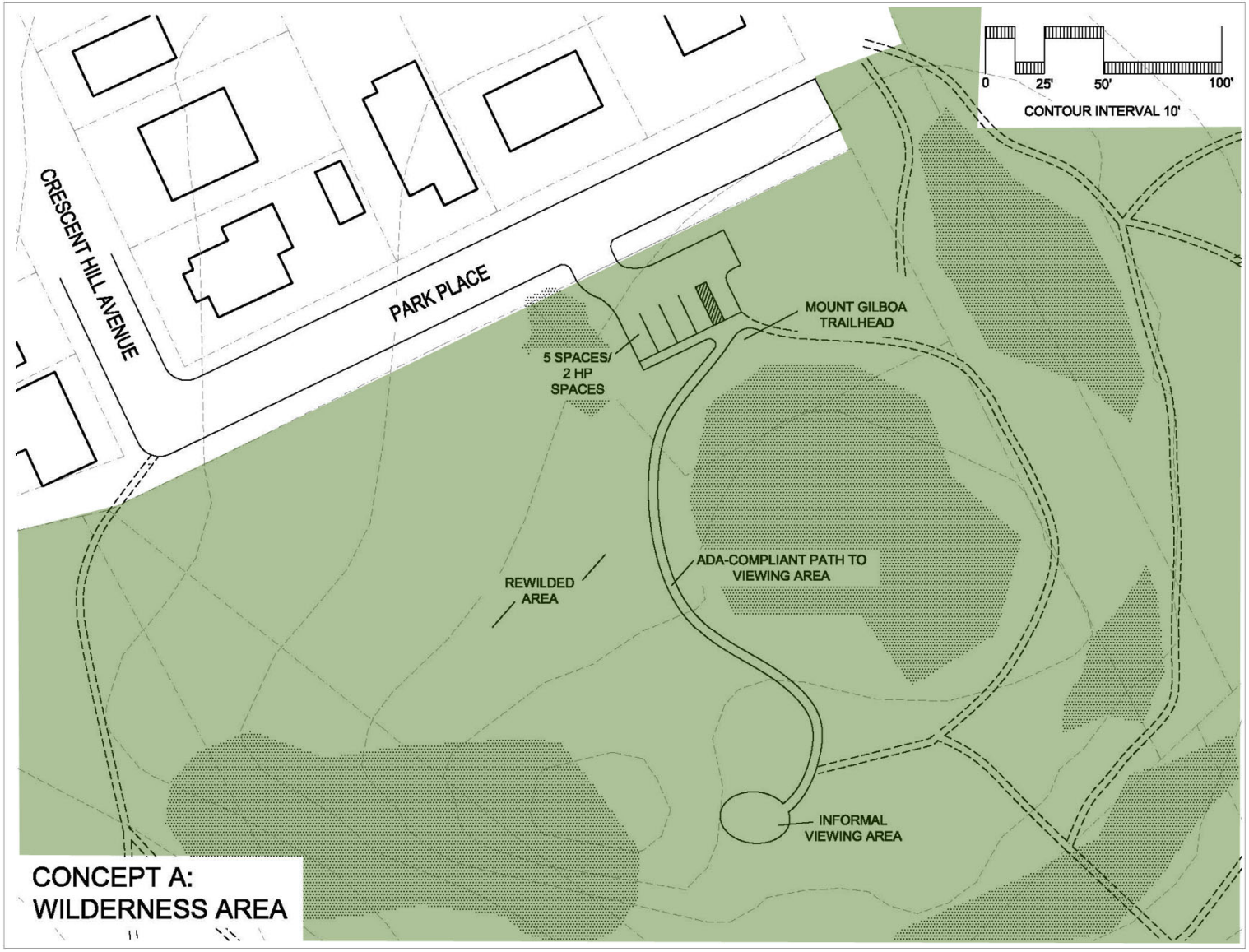
# Recommendations

- Student Engagement.
- General Public Engagement.

# Concept A: Wilderness Area

Emphasis on preserving and enhancing Mount Gilboa's wild characteristics:

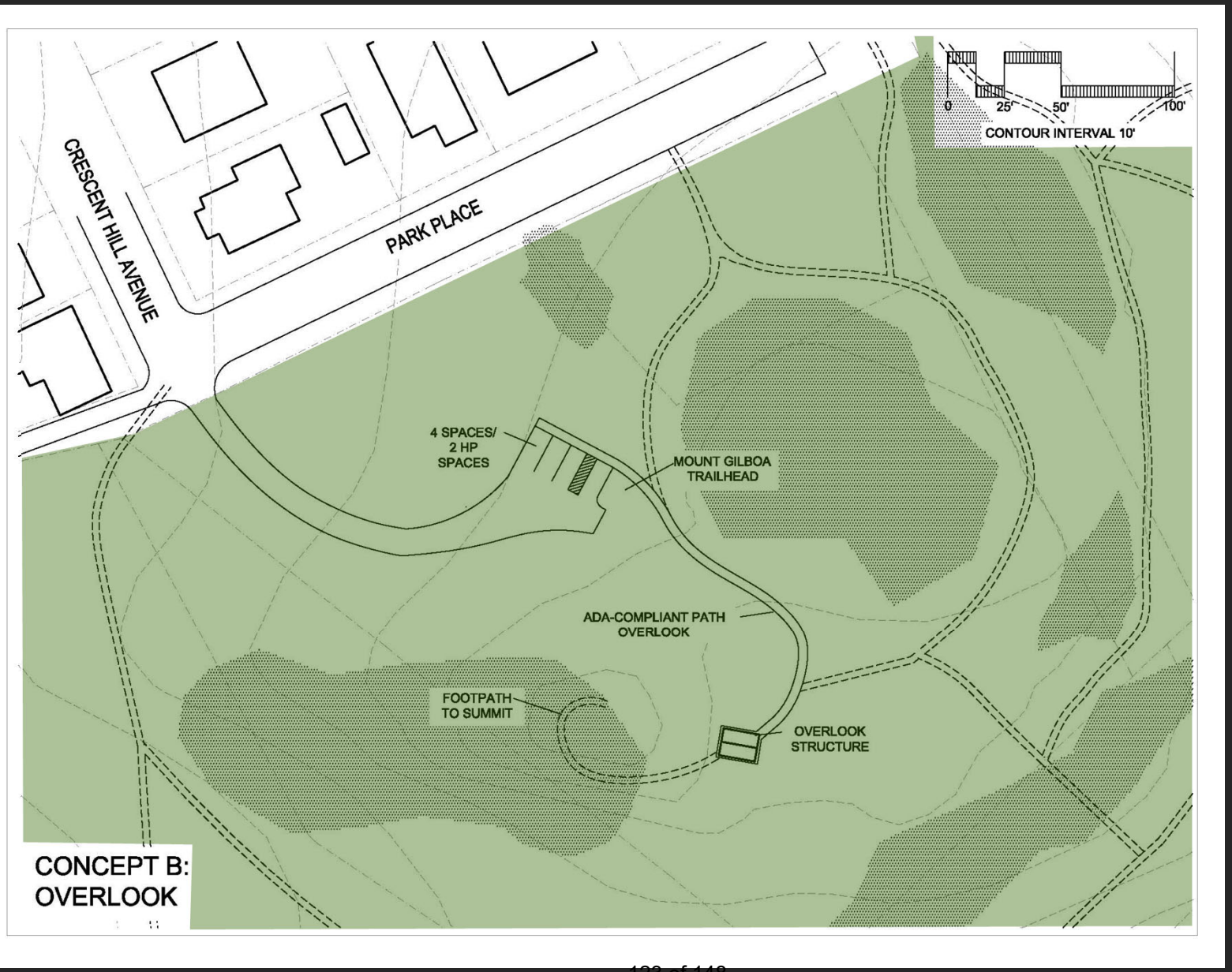
- Rewild site of house, garage, driveway, and asphalt surfaces
- Plant native trees/shrubs
- Create parking area
- Build pathway from parking area to viewing area



# Concept B: Overlook

Emphasis on enhancing views from high points and providing universal access to those points:

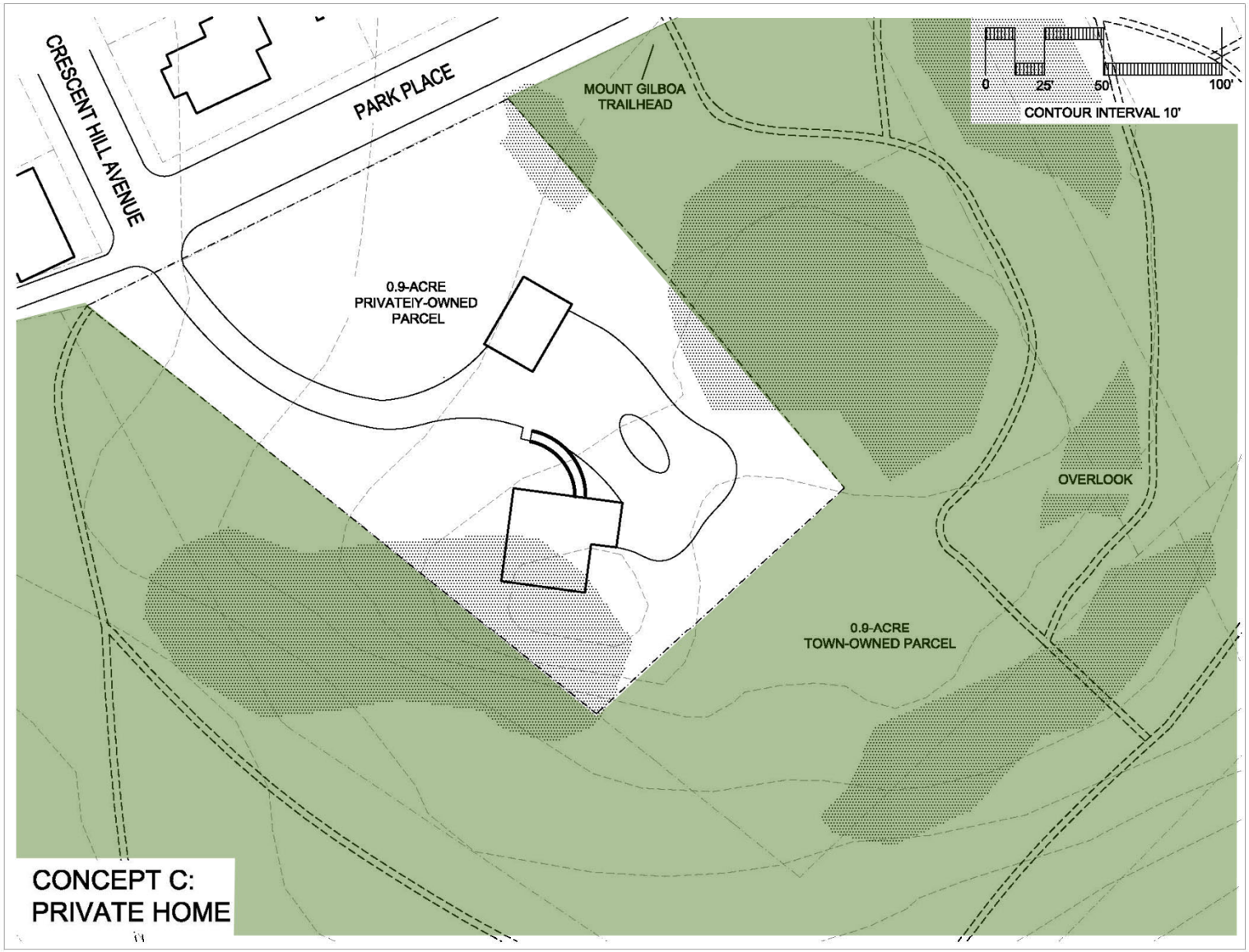
- Rebuild driveway
- Reclaim house/garage site
- Create parking area on site of garage
- Build pathway to overlook structure
- Selectively clear south slopes



# Concept C: Private Home

Emphasis on retaining historic home and preserving conservation land:

- Subdivide parcel
- Sell One Gilboa Road parcel to private owner
- Permanently protect 9.3 acres of conservation land



# Next Steps

- Comments from Arlington residents submitted to the town no later than June 28, 2024. Study report draft can be viewed at:

*Mount Gilboa Feasibility Study | News and Notices | Town of Arlington (arlingtonma.gov)*

- Study report finalized by July 5, 2024; submitted to Arlington Conservation Commission

- Study implementation begins!

For additional information about the
Mount Gilboa Feasibility Study,
including a draft of the study report:

***see the Town of Arlington website :***
***Mount Gilboa Feasibility Study | News and Notices | Town of Arlington (arlingtonma.gov)***

Exploring
Mount Gilboa

# THANK YOU!

## Town of Arlington, Massachusetts

**Medford Boat Club Request for Certificate of Compliance.**

**Summary:**
Medford Boat Club Request for Certificate of Compliance.

**ATTACHMENTS:**

| | Type | File Name | Description |
|---|---|---|---|
| 🗋 | Reference Material | Medford_Boat_Club_CoC_Request_2024.pdf | Medford Boat Club CoC Request 2024.pdf |
| 🗋 | Reference Material | Medford_Boat_Club_Annual_Treatment_Reports.pdf | Medford Boat Club Annual Treatment Reports.pdf |

**Massachusetts Department of Environmental Protection**
Bureau of Resource Protection - Wetlands

# WPA Form 8A – Request for Certificate of Compliance

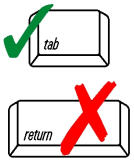
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

Provided by DEP

## A. Project Information

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.




Upon completion of the work authorized in an Order of Conditions, the property owner must request a Certificate of Compliance from the issuing authority stating that the work or portion of the work has been satisfactorily completed.

1. This request is being made by:

Name

Mailing Address

City/Town | State | Zip Code

Phone Number

2. This request is in reference to work regulated by a final Order of Conditions issued to:

Applicant

Dated | DEP File Number

3. The project site is located at:

Street Address | City/Town

Assessors Map/Plat Number | Parcel/Lot Number

4. The final Order of Conditions was recorded at the Registry of Deeds for:

Property Owner (if different)

County | Book | Page

Certificate (if registered land)

5. This request is for certification that (check one):

☐ the work regulated by the above-referenced Order of Conditions has been satisfactorily completed.

☐ the following portions of the work regulated by the above-referenced Order of Conditions have been satisfactorily completed (use additional paper if necessary).

☐ the above-referenced Order of Conditions has lapsed and is therefore no longer valid, and the work regulated by it was never started.

## A. Project Information (cont.)

6. Did the Order of Conditions for this project, or the portion of the project subject to this request, contain an approval of any plans stamped by a registered professional engineer, architect, landscape architect, or land surveyor?

☐ Yes — If yes, attach a written statement by such a professional certifying substantial compliance with the plans and describing what deviation, if any, exists from the plans approved in the Order.

☐ No

## B. Submittal Requirements

Requests for Certificates of Compliance should be directed to the issuing authority that issued the final Order of Conditions (OOC). If the project received an OOC from the Conservation Commission, submit this request to that Commission. If the project was issued a Superseding Order of Conditions or was the subject of an Adjudicatory Hearing Final Decision, submit this request to the appropriate DEP Regional Office (see http://www.mass.gov/eea/agencies/massdep/about/contacts/find-the-massdep-regional-office-for-your-city-or-town.html).

SŌLITUDE LAKE MANAGEMENT

**Annual Report**
2018 Aquatic Management Program
Medford Boat Club
Arlington, MA

*Prepared by:* SŌLitude Lake Management
590 Lake Street
Shrewsbury, MA 01545

*Prepared for:* Medford Boat Club
Mystic Valley Parkway
Arlington, MA 02174

Submitted on: November 30, 2018

**Introduction**
In accordance with the existing aquatic plant management contract for the Medford Boat Club portion of Upper Mystic Lake and Lower Mystic Lake, the following document serves to provide a summary of the survey results, treatment activities and management recommendations for the 2019 season.

All work performed this season was conducted in accordance with the current Order of Conditions (OOC) issued by the Conservation Commission (DEP #91-296) and the MA DEP – Office of Watershed Management issued License to Apply Chemicals (#18369).

A chronology of this year's management tasks and brief description of events is as follows:

**2018 Program Chronology**

- Initial survey.....06/01/18
- Order of Conditions issued.....07/26/18
- Received MA DEP License to Apply Chemicals.....08/02/18
- Pre-treatment survey and herbicide/algaecide treatment.....08/28/18
- Late season survey.....09/13/18

**Initial Survey**
On June 1, a SŌLitude biologist conducted an initial survey of the Medford Boat Club (MBC) dock areas on Upper and Lower Mystic Lakes while surveying other portions of Upper Mystic Lake. The Upper Mystic side had benthic filamentous algae growth, some waterlilies (*Nymphaea* and *Nuphar* spp.) and watershield (*Brasenia schreberi*) within the swimming lanes, and waterweed (*Elodea canadensis*) which was only low growing at the time. The Lower Mystic side also had waterweed, floating-leaf species and filamentous algae entangled amongst them, but sparse, scattered Eurasian watermilfoil (*Myriophyllum spicatum*) was also present throughout the area.

**Herbicide Treatment**
Due to the late issuance of the Order of Conditions, only one treatment event was conducted in 2018. On August 28, a SŌLitude biologist surveyed both dock areas of MBC prior to treatment, which had been previously coordinated with MBC members. The vegetation composition

remained the same as the initial survey, but densities had increased, with plants being taller within the water column. Prior to treatment, temperature, dissolved oxygen and Secchi measurements were collected; data can be found in the table below.

Treatment was conducted by SŌLitude's state licensed aquatic applicators in compliance with the Order of Conditions, MA DEP permit and herbicide labels. The treatment on both sides utilized diquat herbicide and a copper-based algaecide. The treatment areas were primarily adjacent to the MBC docks as the plant growth was most prevalent there. These treatments were conducted by diluting the herbicides with lake water and applied using a low-pressure pump system. The small patch of waterlilies/watershield within the swim lanes on the Upper Mystic side was also treated topically with AquaPro herbicide via low-pressure backpack sprayer to alleviate the plants' nuisance to swimmers. Prior to treatment, the Conservation Commission was notified of treatment and water-use restrictions signs were posted around the MBC for restrictions following treatment. At no time during the treatment were adverse impacts to non-target or aquatic organisms either observed or reported.

All post-treatment temperature, dissolved oxygen and Secchi measurements collected in compliance with the OOC are compiled in the table below.

Table 1. 2018 Monitoring Data

| Date | Waterbody Side | Temperature (ºC) | Dissolved Oxygen – surface(mg/L) | Secchi Depth (ft) | Herring Presence (Y/N) |
|---|---|---|---|---|---|
| 08/28 | Upper | 25.2 | 9.43 | 10.2 | No |
| | Lower | 25.7 | 9.36 | 8.5 | No |
| 08/29 | Upper | 25.1 | 9.52 | 10.0 | No |
| | Lower | 25.9 | 9.58 | 8.8 | No |
| 08/30 | Upper | 25.4 | 9.21 | 10.1 | No |
| | Lower | 25.7 | 9.50 | 8.8 | No |
| 09/04 | Upper | 25.7 | 9.15 | 9.8 | No |
| | Lower | 26.0 | 9.34 | 8.5 | No |
| 09/11 | Upper | 24.2 | 9.28 | 10.4 | No |
| | Lower | 24.7 | 9.67 | 8.4 | No |

**Late Season Inspection**

On September 13, SŌLitude biologists conducted the late season survey of the previously treated areas. The goal of this survey was to determine the efficacy of the treatments and to note any regrowth of target species. Overall, the survey indicated that the treatment efforts were successful as minimal growth of target species was observed.

**Ongoing Management Recommendations**

Based on the observations and treatments this season, good control of the target species has often been achieved, with no observable or reported impacts to non-target organisms, most specifically herring. Based on the success of the program, we recommend continuing with a similar approach in 2018, but with the initial treatment in early July. Surveys in conjunction with appropriately timed treatments have maintained desirable conditions within other portions of Upper Mystic. As always, if problematic vegetation and/or algae conditions arise, the most effective yet approved management strategy will be used to continue balancing conditions while maintaining a healthy ecosystem.

We enjoyed working with you again this season and look forward to another season of management together in 2019. If you have any questions or need any additional information, please feel free to contact our office.



590 Lake Street, Shrewsbury, MA 01545 | 508-885-0101 | SOLITUDELAKEMANAGEMENT.COM

SŌLITUDE LAKE MANAGEMENT

# Annual Report
2019 Aquatic Management Program
Medford Boat Club
Arlington, MA

*Prepared by:* SŌLitude Lake Management
590 Lake Street
Shrewsbury, MA 01545

*Prepared for:* Medford Boat Club
Mystic Valley Parkway
Arlington, MA 02174

Submitted on: December 1, 2019

## Introduction
In accordance with the existing aquatic plant management contract for the Medford Boat Club portion of Upper Mystic Lake and Lower Mystic Lake, the following document serves to provide a summary of the survey results, treatment activities and management recommendations for the 2020 season.

All work performed this season was conducted in accordance with the current Order of Conditions (OOC) issued by the Conservation Commission (DEP #91-296) and the MA DEP – Office of Watershed Management issued License to Apply Chemicals (#19264).

A chronology of this year's management tasks and brief description of events is as follows:

## 2019 Program Chronology

- Received MA DEP License to Apply Chemicals ..... 06/18/19
- Pre-treatment survey ..... 06/27/19
- Initial Herbicide/algaecide treatment ..... 07/25/19
- Follow-up herbicide/algaecide treatment ..... 08/23/19
- Late season survey ..... 10/24/19

## Initial Survey
On June 18, a SŌLitude biologist conducted an initial survey of the Medford Boat Club (MBC) dock areas on Upper and Lower Mystic Lakes while surveying other portions of Upper Mystic Lake. The Upper Mystic side had benthic filamentous algae growth, some watershield (*Brasenia schreberi*) within the swimming lanes, and waterweed (*Elodea canadensis*) which was only low growing at the time. The Lower Mystic side also had waterweed, floating-leaf species and filamentous algae entangled amongst them, but sparse, scattered Eurasian watermilfoil (*Myriophyllum spicatum*) was also present throughout the area.

## Herbicide Treatments
On July 25, a SŌLitude biologist surveyed both dock areas of MBC prior to treatment, which had been previously coordinated with MBC members. The vegetation composition remained the same as the initial survey, but densities had increased, with plants being taller within the water

column. Prior to treatment, temperature, dissolved oxygen and Secchi measurements were collected; data can be found in the table below.

Treatment was conducted by SŌLitude's state licensed aquatic applicators in compliance with the Order of Conditions, MA DEP permit and herbicide labels. The treatment on both sides utilized diquat herbicide and a copper-based algaecide. The treatment areas were primarily adjacent to the MBC docks as the plant growth was most prevalent there. These treatments were conducted by diluting the herbicides with lake water and applied using a low-pressure pump system or backpack. The small patch of waterlilies/watershield within the swim lanes on the Upper Mystic side was also treated topically with AquaPro herbicide via low-pressure backpack sprayer to alleviate the plants' nuisance to swimmers. Prior to treatment, the Conservation Commission was notified of treatment and water-use restrictions signs were posted around the MBC for restrictions following treatment. At no time during the treatment were adverse impacts to non-target or aquatic organisms either observed or reported.

A follow-up herbicide/algaecide treatment was conducted on August 23, in coordination with MBC, due to nuisance conditions present within the swim areas. Prior to treatment, temperature, dissolved oxygen and Secchi measurements were collected; data can be found in the table below.

Treatment was conducted by SŌLitude's state licensed aquatic applicators in compliance with the Order of Conditions, MA DEP permit and herbicide labels. The treatment on both sides utilized AquaPro herbicide. Prior to treatment, the Conservation Commission was notified of treatment and water-use restrictions signs were posted around the MBC for restrictions following treatment. At no time during the treatment were adverse impacts to non-target or aquatic organisms either observed or reported

All post-treatment temperature, dissolved oxygen and Secchi measurements collected in compliance with the OOC are compiled in the table below.

Table 1. 2019 Monitoring Data

| Date | Waterbody Side | Temperature (ºC) | Dissolved Oxygen – surface(mg/L) | Secchi Depth (ft) | Herring Presence (Y/N) |
|---|---|---|---|---|---|
| 07/25 | Upper | 27.5 | 10.45 | 10.2 | No |
| | Lower | 27.6 | 9.98 | 8.5 | No |
| 07/26 | Upper | 27.5 | 10.20 | 10.0 | No |
| | Lower | 27.6 | 9.97 | 8.0 | No |
| 07/29 | Upper | 27.2 | 10.01 | 10.0 | No |
| | Lower | 27.7 | 9.86 | 8.8 | No |
| 08/01 | Upper | 27.0 | 9.15 | 10.2 | No |
| | Lower | 27.2 | 9.49 | 8.7 | No |
| 08/08 | Upper | 27.5 | 9.59 | 10.0 | No |
| | Lower | 27.4 | 9.61 | 8.5 | No |
| 08/23 | Upper | 25.2 | 10.17 | 10.1 | No |
| | Lower | 25.5 | 9.78 | 8.7 | No |



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| | | | | | |
|---|---|---|---|---|---|
| 08/26 | Upper | 25.4 | 9.98 | 10.1 | No |
| | Lower | 25.5 | 9.86 | 8.6 | No |
| 08/27 | Upper | 24.9 | 9.85 | 9.9 | No |
| | Lower | 25.0 | 9.90 | 8.7 | No |
| 08/30 | Upper | 24.7 | 9.82 | 10.2 | No |
| | Lower | 24.9 | 9.85 | 9.0 | No |
| 09/06 | Upper | 25.0 | 9.95 | 10.3 | No |
| | Lower | 25.0 | 9.97 | 9.1 | No |

**Late Season Inspection**

On October 24, SŌLitude biologists conducted the late season survey of the previously treated areas. The goal of this survey was to determine the efficacy of the treatments and to note any regrowth of target species. Overall, the survey indicated that the treatment efforts were successful as minimal growth of target species was observed.

**Ongoing Management Recommendations**

Based on the observations and treatments this season, good control of the target species has often been achieved, with no observable or reported impacts to non-target organisms, most specifically herring. Based on the success of the program, we recommend continuing with a similar approach in 2019. Surveys in conjunction with appropriately timed treatments have maintained desirable conditions within other portions of Upper Mystic. As always, if problematic vegetation and/or algae conditions arise, the most effective yet approved management strategy will be used to continue balancing conditions while maintaining a healthy ecosystem.

We enjoyed working with you again this season and look forward to another season of management together in 2020. If you have any questions or need any additional information, please feel free to contact our office.



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SOLITUDE LAKE MANAGEMENT

**Annual Report**
2020 Aquatic Management Program
Medford Boat Club
Arlington, MA

*Prepared for:* Medford Boat Club
Mystic Valley Parkway
Arlington, MA 02174

Submitted: December 2020

**Introduction**
In accordance with the existing aquatic plant management contract for the Medford Boat Club portion of Upper Mystic Lake and Lower Mystic Lake, the following document serves to provide a summary of the survey results, treatment activities and management recommendations for the 2021 season.

All work performed this season was conducted in accordance with the current Order of Conditions (OOC) issued by the Conservation Commission (DEP #91-296) and the MA DEP – Office of Watershed Management issued License to Apply Chemicals (#WM04-0000163).

A chronology of this year's management tasks, and brief description of events is as follows:

**2020 Program Chronology**

- Received MA DEP License to Apply Chemicals ..... 04/29/20
- Pre-treatment survey ..... 05/20/20
- Initial Herbicide/algaecide treatment ..... 07/16/20
- Interim survey ..... 08/18/20
- Late season survey ..... 08/27/20

**Initial Survey**
A SOLitude Environmental Scientist visited Medford Boat Club for a survey on May 20, 2020. The purpose of this survey was to determine the vegetation composition and distribution within the area of the boat club in Upper and Lower Mystic Lakes. Trace macroalgae (*Nitella* spp.) was observed in the Upper Mystic lake area, though no other algae or vegetation species were observed. There was a complaint of sparse Eurasian watermilfoil (*Myriophyllum spicatum*) which was observed in the area around the dock on Lower Mystic Lake. In both Upper and Lower Mystic Lake areas of the boat club abundant herring were observed.

**Herbicide Treatments**
The area of Medford Boat Club was revisited by a SOLitude biologist for treatment on July 16, 2020. At this time an herbicide and algaecide application occurred, utilizing copper-based algaecide and diquat herbicide. The vegetation composition remained the same as the initial survey, but densities had increased, with plants being taller within the water column. Prior to treatment, temperature, dissolved oxygen and Secchi measurements were collected; data can be found in


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the table below. This treatment was performed with the use of an aluminum work-skiff outfitted with an onboard low pressure pump system and tank for which to dilute herbicide/algaecide with lake water for the Upper Mystic side, while a low-pressure backpack sprayer was used on the Lower Mystic side. Treatment was conducted by SŌLitude's state licensed aquatic applicators in compliance with the Order of Conditions, MA DEP permit and herbicide labels. The treatment areas were adjacent to the MBC docks on both lakes as the plant growth was most prevalent there. Prior to treatment, the Conservation Commission was notified of treatment and water-use restrictions signs were posted around the MBC for restrictions following treatment. At no time during the treatment were adverse impacts to non-target or aquatic organisms either observed or reported.

All post-treatment temperature, dissolved oxygen and Secchi measurements collected in compliance with the OOC are compiled in the table below.

Table 1. 20120 Monitoring Data

| Date | Days after treatment | Waterbody Side | Temperature (°C) | Dissolved Oxygen – surface(mg/L) | Secchi Depth (ft) | Herring Presence (Y/N) |
|---|---|---|---|---|---|---|
| 07/16 | Day of | Upper | 26.2 | 8.17 | 9.7 | No |
| | | Lower | 26.2 | 8.31 | 6.6 | No |
| 07/17 | 1 | Upper | 26.2 | 9.20 | 10.2 | No |
| | | Lower | 26.2 | 8.87 | 6.8 | No |
| 07/18 | 2 | Upper | 25.8 | 9.15 | 9.9 | No |
| | | Lower | 26.4 | 8.92 | 6.8 | No |
| 07/23 | 7 | Upper | 26.5 | 9.18 | 10.1 | No |
| | | Lower | 26.1 | 9.01 | 6.9 | No |
| 07/30 | 14 | Upper | 25.9 | 9.09 | 9.8 | No |
| | | Lower | 26.0 | 8.99 | 6.6 | No |

**Late Season Inspection**

While nearby on August 18, an interim, cursory inspection of MBC's dock areas was conducted to ensure vegetation and algae growth was remaining minimal or if any additional treatment effort was required. Conditions were optimal, with minimal nuisance growth observed. On August 27, SŌLitude biologists conducted the late season survey of the previously treated areas. The goal of this survey was to determine the efficacy of the treatments and to note any regrowth of target species. Overall, the survey indicated that the treatment efforts were successful as minimal growth of target species was observed.

**Ongoing Management Recommendations**

Based on the observations and treatments this season, excellent control of the target species has been achieved, with no observable or reported impacts to non-target organisms, most specifically herring. Based on the success of the program, we recommend continuing with a similar approach in 2021. Surveys in conjunction with appropriately timed treatments have maintained desirable conditions within other portions of Upper Mystic. As always, if problematic vegetation and/or algae conditions arise, the most effective yet approved management strategy will be used to continue balancing conditions while maintaining a healthy ecosystem.

If you have any questions regarding the 2020 management program or the recommendations for 2021, please do not hesitate to contact our office. We enjoyed working with you in 2020 and look forward to working with you again in 2021.



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## Town of Arlington, Massachusetts

**DEP #091-0363: Notice of Intent: Medford Boat Club.**

**Summary:**
DEP #091-0363: Notice of Intent: Medford Boat Club.
The Conservation Commission will hold a public hearing under the Wetlands Protection Act and Arlington Bylaw for Wetlands Protection to consider a Notice of Intent for an aquatic management program by the Medford Boat Club located on the Mystic Lakes.

**ATTACHMENTS:**

| | Type | File Name | Description |
|---|---|---|---|
| 🗋 | Reference Material | RNA_SOL_2024_MedfordBoatClub_AppendixA0524_(part_1)_-_signed.pdf | Medford Boat Club NOI Appendix A |

## Town of Arlington, Massachusetts

**DEP #091-0356: Notice of Intent: Thorndike Place (Continued from 06/06/2024).**

**Summary:**
DEP #091-0356: Notice of Intent: Thorndike Place (Continued from 06/06/2024).
The Conservation Commission will hold a public hearing under the Wetlands Protection Act to consider a Notice of Intent for the construction of Thorndike Place, a multifamily development on Dorothy Road in Arlington. The Commission will vote to continue the hearing to the July 11, 2024, meeting.

**ATTACHMENTS:**

| | Type | File Name | Description |
|---|---|---|---|
| 🗋 | Reference Material | 2024-06-10_Thorndike_Place_Stormwater_Summary.pdf | 2024-06-10 Thorndike Place Stormwater Summary.pdf |

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JUNE 10, 2024

Town of Arlington Conservation Commission
c/o Mr. David Morgan, Environmental Planner + Conservation Agent
Robbins Memorial Town Hall
730 Massachusetts Avenue
Arlington, Massachusetts 02476

**RE: Stormwater Management, Soil Test Pits, and Groundwater Monitoring Summary**
**Thorndike Place Residential Development**

Dear Members of the Arlington Conservation Commission,

In anticipation of additional peer review on the stormwater management design for the above referenced Project, BSC Group, Inc. (BSC) is providing this summary of information provided to the Commission regarding the stormwater management design, soil test pits performed, and groundwater data obtained on site. While the majority of this information has previously been provided, we believe this summary will be useful for the Commission and its peer reviewer to expedite final review of the stormwater management design for the Project.

*Stormwater Design Information Submitted to Date*

Site Plans and associated Stormwater Report were submitted to the Commission along with the Notice of Intent (NOI) for the Project on September 6, 2023. The Site Plans are titled *Thorndike Place Notice of Intent, Dorothy Road, Arlington, Massachusetts*, are dated September 6, 2023, and consist of 14 sheets. The Stormwater Report is dated November 2020 with revision dates of August 2021 and September 2023. This information was peer reviewed by Hatch Associates Consultants, Inc. (Hatch) in a series of memorandums dated January 23, 2024, February 7, 2024, and February 14, 2024, as well as an email from Ross Mullen, PE, CFM of Hatch on March 15, 2024. In response to these reviews, BSC submitted additional information in letters dated January 24, 2024, February 13, 2024, and February 28, 2024. In its February 14, 2024, memorandum, Hatch stated, "After review of the proposed Thorndike Place stormwater design relative to the Massachusetts Stormwater Handbook, Hatch has determined the project is in compliance with the following conditions:"[1].

1. Permanent establishment of vegetation on the south side of the senior living complex prior to runoff from the roof discharging to the wetland and verification of non-erosive velocities at this discharge.

   *The Applicant has stated in public hearings that this vegetation establishment is acceptable and BSC has provided verification of non-erosive velocities in our February 13, 2024, letter.*

2. Applicant verifies that at least ten feet of separation is provided between the R-Tank$^{XD}$ features and the townhome basement foundations.

   *As previously stated in a public hearing for the Project, while we do not agree with Hatch's interpretation of the separation requirements, the Project is willing to adjust the R-Tank$^{XD}$ systems to provide the minimum 10-feet of separation to basements should the Commission request it.*

3. Review and, if necessary, resubmission of groundwater mounding analysis of the Stormtrap ST1 infiltration feature to demonstrate compliance. Provide a defensible basis for the selected horizontal

[1] The Project Applicant has agreed to comply with all four conditions listed by Hatch in that memorandum as noted above.



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hydraulic conductivity and duration of infiltration period. Verify adequate separation if provided between the senior living complex and the mounded groundwater table.

*Based on discussions with the Commission, BSC has revised our groundwater mounding analysis and, it is our understanding, that this will be one of the items under additional peer review upon selection of a peer review consultant. A more detailed discussion of the revised groundwater mounding analysis is provided in the following sections.*

4. If the applicant uses asphalt shingles on the townhomes, to manage the loose grit from the shingles:
    a. The roof drains shall remain disconnected from the Stormtrap ST1 infiltration system until after construction is substantially complete and connected prior to occupancy or
    b. The R-Tank$^{XD}$ systems shall be inspected, and loose grit removed prior to occupancy.

*These requirements were accepted and added to the Operation and Maintenance Plan with BSC's January 24, 2024, response to comments letter.*

*Soil Testing and Estimated Seasonal High Groundwater*

As part of the Comprehensive Permit review process, BSC performed three (3) soil test pits on the Project site in November 2020, to determine soil types and estimated seasonal high groundwater (ESHGW) elevation for use in stormwater management design. Subsequent to the performance of these test pits, the project was revised to its current configuration and was unanimously approved by the Arlington Zoning Board's Decision to grant a Comprehensive Permit, as filed with the Town Clerk on December 1, 2021. A condition of the Comprehensive Permit required additional soil testing to be performed during April or May in the locations of the updated stormwater management systems. In May 2023, BSC performed an additional eight (8) soil test pits in the location of the updated stormwater management systems. Further, in accordance with the Comprehensive Permit condition, these test pits were witnessed and verified by an independent third-party, Whitestone Associates, as selected by the Town as their representative. As part of this May 2023 test pit work, three (3) groundwater measurement wells were installed – one in the location of the bio-retention area, one in one of the townhouse infiltration systems, and one in the larger infiltration system. These 2023 test pits resulted in the determination of an ESHGW elevation of 4.0 for the entirety of the site as this elevation was the highest elevation at which groundwater and/or redoximorphic features were found throughout all of the locations. This selection was made to provide a conservative approach to stormwater management design.

In March 2024, during the course of the Commission's public hearings on the Project, it was requested that the Applicant perform additional test pits on site along with an additional groundwater well in the large infiltration system and monitor all four wells on site.

On April 17, 2024, BSC performed five (5) additional soil test pits in the area of the large infiltration system and installed one (1) additional groundwater well (TP-9). BSC coordinated the installation of the additional test pits with the Commission, and the same was observed by a representative from the Arlington Department of Public Works Engineering Division. The May 2023 and April 2024 test pit data is summarized in the table below.

| Test Pit | Existing Grade | Total Depth (in.) | Depth Fill (in.) | Depth Standing GW (in.) | Depth Weeping GW (in) | Depth to Redox (in.) | ESHGW |
|---|---|---|---|---|---|---|---|
| TP-1 | 10.66 | 120 | 90 | 114 | 108 | n/a | 1.66 |
| TP-2 | 8.79 | 104 | 83 | 97 | n/a | n/a | 0.71 |
| TP-3 | 7.88 | 87 | 27 | 82 | n/a | 51 | 3.63 |
| TP-4 | 7.08 | 96 | 64 | 72 | 68 | n/a | 1.41 |
| TP-5 | 7.98 | 74 | 33 | 60 | 60 | 48 | 3.98 |
| TP-6 | 6.87 | 132 | 30 | 110 | 110 | 64 | 1.54 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| TP-7 | 8.92 | 114 | 108 | 110 | n/a | n/a | -0.24 |
| TP-8 | 11.83 | 120 | 120 | n/a | 112 | n/a | 2.50 |
| TP-9 | 11.47 | 118 | 100 | 116 | 90 | n/a | 3.97 |
| TP-10 | 11.27 | 130 | 130 | 126 | 94 | n/a | 3.44 |
| TP-11 | 11.09 | 114 | 114 | 111 | 93 | n/a | 3.34 |
| TP-12 | 8.37 | 76 | 76 | 68 | 53 | n/a | 3.95 |
| TP-13 | 7.96 | 74 | 74 | 67 | 57 | n/a | 3.21 |

In addition to the preliminary groundwater level observations from November 2020, the May 2023 groundwater observations of the eight test pits within the infiltration systems, and the April 2024 groundwater observations in five additional test pits, BSC performed seven (7) additional groundwater level measurements of the on-site wells during March, April, and May 2024. During the final two (2) readings, David Morgan, Conservation Agent observed the measurements per the request of the Commission. The measurements are summarized below (all elevations in NAVD88):

| Well | 3/15/24 | 4/1/24 | 4/17/24 | 4/24/24 | 5/2/24 | 5/9/24 | 5/16/24 |
|---|---|---|---|---|---|---|---|
| TP-1 | 2.26 | 2.94 | 3.01 | 2.87 | 2.69 | 2.74 | 2.64 |
| TP-6 | 2.37 | 3.00 | 2.95 | 2.68 | 2.28 | 2.79 | 2.05 |
| TP-7 | 2.82 | 3.41 | 3.47 | 3.30 | 3.05 | 3.26 | 2.95 |
| TP-9 | n/a* | n/a* | 3.97* | 3.78 | 3.59 | 3.30 | 3.30 |

* TP-9 was installed on 4/17/24. Groundwater elevation shown for that date is observed groundwater in the test pit.

Additionally, it should be noted that the month of March 2024 was one of the wettest months since 1895. The attached graphics from the National Oceanic and Atmospheric Administration (NOAA) demonstrate the severity of precipitation that occurred in March. As such, groundwater elevations during this time would be expected to be above normal conditions. This information further demonstrates that the use of 4.0 as ESHGW elevation is appropriate as no observed or measured groundwater elevations during this Spring have reached or exceeded this elevation.

BSC believes that the estimated seasonal high groundwater (ESHGW) elevation has been determined on observed groundwater levels over the course of no less than seven readings taken during the spring months in full compliance with the Massachusetts Stormwater Handbook. With the additional test pit data and groundwater monitoring within the 2024 spring season supporting the ESHGW determined by BSC upon the results of test pits and monitoring wells first read in Spring 2023, the ESHGW of 4.0 is the correct and appropriate value for use in the project's stormwater management design.

*Groundwater Mounding Analysis*

In accordance with the requirements of Stormwater Standard 3, as detailed in DEP's Massachusetts Stormwater Handbook, a groundwater mounding analysis was performed for the infiltration systems as these systems would be used to attenuate peak flows for the 10-year storm event and larger and have less than 4-feet of separation to ESHGW. During the course of the public hearings on the Project, it was requested that the previously performed mounding analysis be revised to utilize a duration of 24-hours. Attached are updated analyses for the large infiltration system and the smaller, townhouse infiltration systems. This analysis has been performed using the Hantush Method as prescribed by Volume 3, Chapter 3 of DEP's Massachusetts Stormwater Handbook. The following details how each variable in the calculation was selected:

1. Recharge (infiltration rate): The recharge rate is equal to the required recharge volume divided by the bottom area of the infiltration system divided by the duration of infiltration period. This calculation

demonstrates that the required recharge volume will be completely infiltrated during the infiltration period.

   a. Large Infiltration System = (1,638 cft)/(8,137 sft)/(1 day) = 0.2013 ft/day

   b. Small Infiltration System = (22.42 cft)/((294 sft)/(1 day) = 0.0762 ft/day

2. Specific yield taken from US Department of the Interior Geological Survey Water Supply Paper 1662-D, Table 29, average value for silt (conservative value based on observed on-site soils) = 0.080. A copy of this table is attached.
3. Horizontal hydraulic conductivity is generally accepted as ten times the vertical hydraulic conductivity. The vertical hydraulic conductivity is taken from the Rawls rates included in the DEP's Massachusetts Stormwater Handbook for silt loam (conservative value based on observed on-site soils) = 5.40 ft/day
4. Duration of infiltration period is 24 hours or 1 day to comply with requests received during the Commission's public hearings on the Project.
5. Initial saturated thickness is based on the bottom of the test pit elevations compared to the ESHGW elevation of 4.0 = 5 feet. This value assumes that a confining layer exists immediately below the bottom of test pits excavated on site and is expected to be a very conservative value.

Utilizing the variable documented above and the dimensions of the infiltration systems, the maximum groundwater mounding beneath the infiltration systems are calculated to be 1.845-feet and 0.199-feet for the large and small systems, respectively. Both of these values are less than the provided separation to ESHGW, which is at least 2-feet in all systems. As such, the mounding analysis complies with the requirements of the DEP's Massachusetts Stormwater Handbook as groundwater mounds will not impact the systems' ability to infiltrate the required recharge volume nor will it break out above the land or water surface of a wetland. Please see the attached Hantush Method calculation sheet for details.

As previously stated during the Commission's public hearings on the Project, BSC believes that this information demonstrates full compliance with all the Stormwater Standards of the Wetlands Protection Act as detailed in the DEP's Massachusetts Stormwater Handbook. We look forward to discussing this matter further with the selected peer review consultant and the Commission as the public hearing process moves forward. Please feel free to contact me at (617) 896-4386 or drinaldi@bscgroup.com should you have any questions on the information in this report.

Sincerely,
BSC GROUP, INC.

**Dominic Rinaldi, PE**
Senior Associate

Attachments: NOAA Precipitation Information March 2024
Revised Groundwater Mounding Analyses
US Department of the Interior Geological Survey Water Supply Paper 1662-D, Table 29



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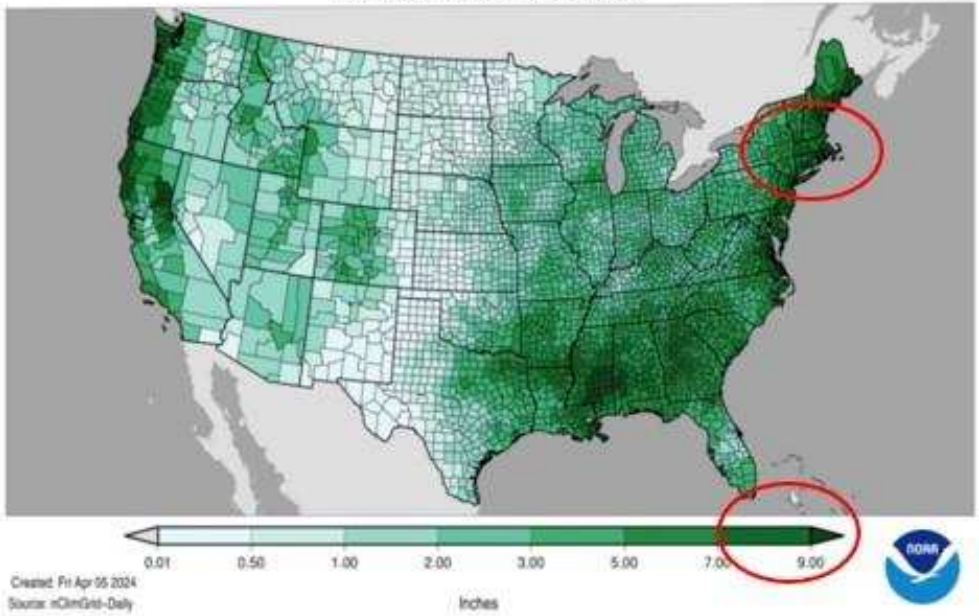
## Total Precipitation
March 01–31, 2024

NOAA's National Centers for Environmental Information

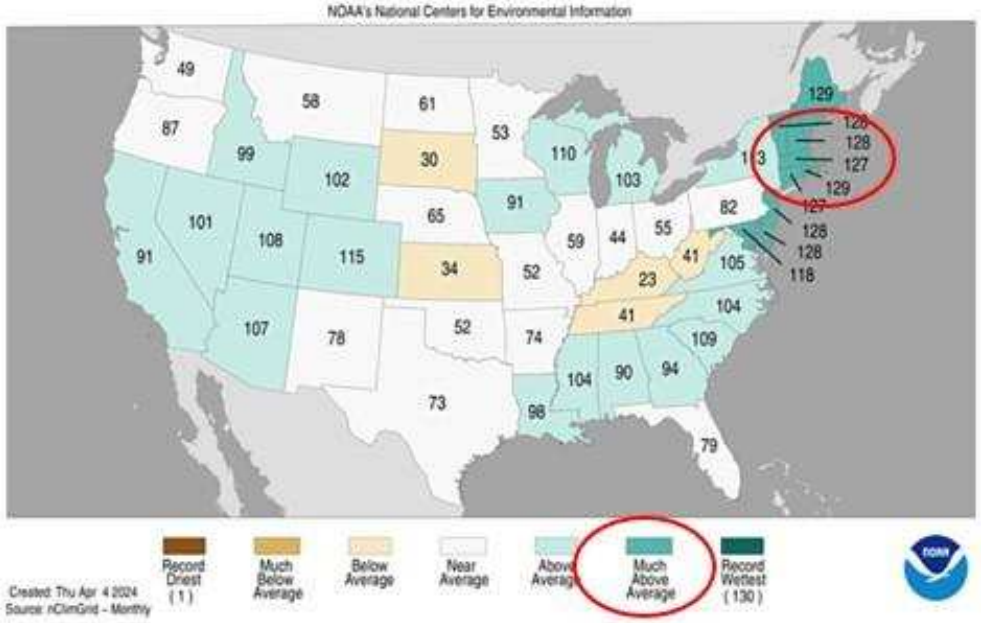



Created: Fri Apr 05 2024
Source: nClimGrid-Daily

## Statewide Precipitation Ranks
March 2024

Ranking Period: 1895–2024

NOAA's National Centers for Environmental Information

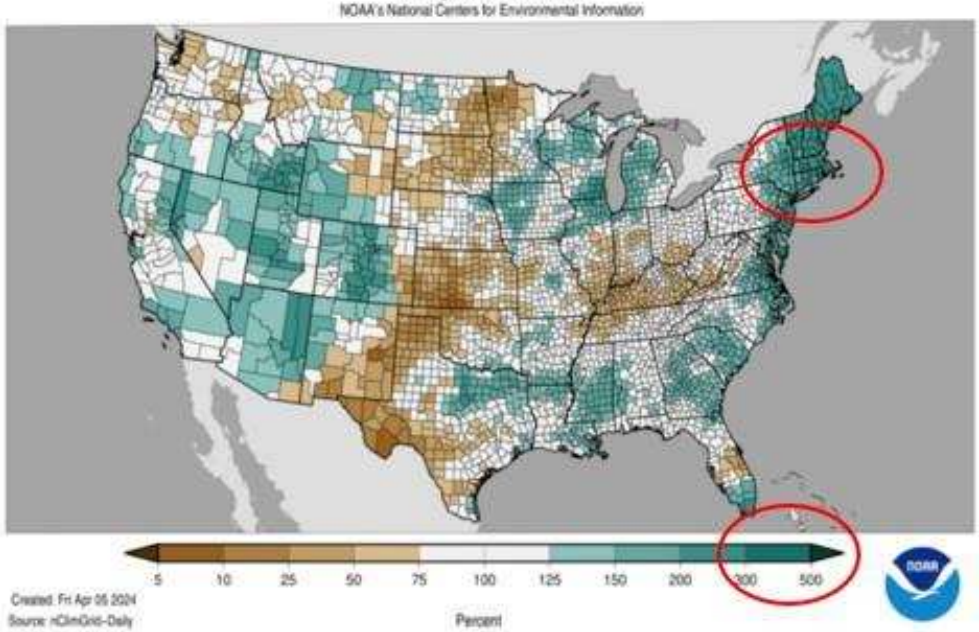



Created: Thu Apr 4 2024
Source: nClimGrid - Monthly

## Precipitation Percent of Average
March 01–31, 2024

Average Period: 1991–2020

NOAA's National Centers for Environmental Information

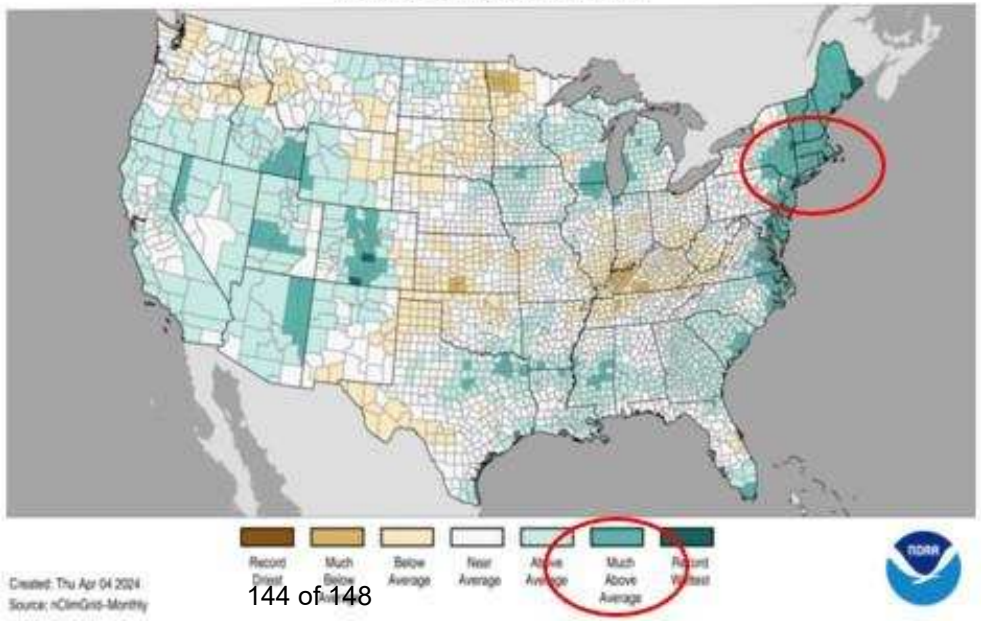



Created: Fri Apr 05 2024
Source: nClimGrid-Daily

## County Precipitation Ranks
March 2024

Ranking Period: 1895–2024

NOAA's National Centers for Environmental Information




Created: Thu Apr 04 2024
Source: nClimGrid-Monthly

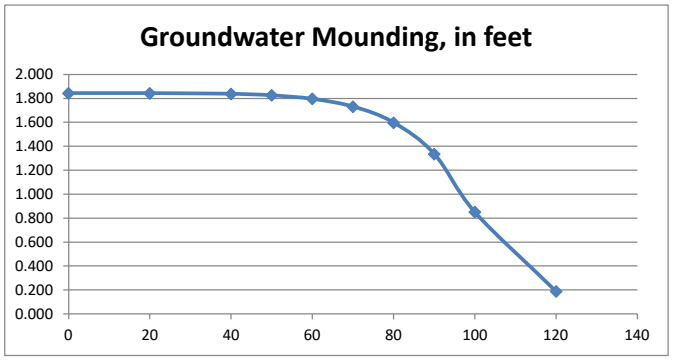
Pond 1P Mounding - Results

| Input Values | | | inch/hour | feet/day | |
|---|---|---|---|---|---|
| 0.2013 | *R* | Recharge (infiltration) rate (feet/day) | 0.67 | 1.33 | |
| 0.080 | Sy | Specific yield, Sy (dimensionless, between 0 and 1] | | | |
| 5.40 | K | Horizontal hydraulic conductivity, Kh (feet/day)* | 2.00 | 4.00 | In the report accompanying this spreadsheet (USGS SIR 2010-5102), vertical soil permeability (ft/d) is assumed to be one-tenth horizontal hydraulic conductivity (ft/d). |
| 98.420 | x | 1/2 length of basin (x direction, in feet) | | | |
| 20.670 | y | 1/2 width of basin (y direction, in feet) | hours | days | |
| 1.000 | t | duration of infiltration period (days) | 36 | 1.50 | |
| 5.000 | hi(0) | initial thickness of saturated zone (feet) | | | |

| | | |
|---|---|---|
| 6.845 | h(max) | maximum thickness of saturated zone (beneath center of basin at end of infiltration period) |
| 1.845 | Δh(max) | maximum groundwater mounding (beneath center of basin at end of infiltration period) |

| Ground-water Mounding, in feet | Distance from center of basin in x direction, in feet |
|---|---|
| 1.845 | 0 |
| 1.845 | 20 |
| 1.839 | 40 |
| 1.827 | 50 |
| 1.798 | 60 |
| 1.733 | 70 |
| 1.599 | 80 |
| 1.337 | 90 |
| 0.851 | 100 |
| 0.189 | 120 |

Re-Calculate Now




## Disclaimer

This spreadsheet solving the Hantush (1967) equation for ground-water mounding beneath an infiltration basin is made available to the general public as a convenience for those wishing to replicate values documented in the USGS Scientific Investigations Report 2010-5102 "Groundwater mounding beneath hypothetical stormwater infiltration basins" or to calculate values based on user-specified site conditions. Any changes made to the spreadsheet (other than values identified as user-specified) after transmission from the USGS could have unintended, undesirable consequences. These consequences could include, but may not be limited to: erroneous output, numerical instabilities, and violations of underlying assumptions that are inherent in results presented in the accompanying USGS published report. The USGS assumes no responsibility for the consequences of any changes made to the spreadsheet. If changes are made to the spreadsheet, the user is responsible for documenting the changes and justifying the results and conclusions.

# Townhouse Infiltration

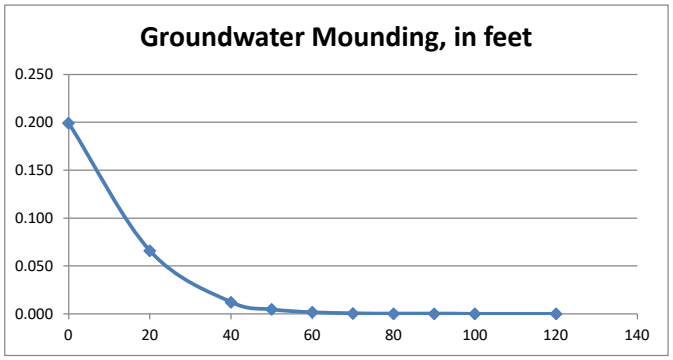
Pond 104P Mounding - Results

| Input Values | | | inch/hour | feet/day | |
|---|---|---|---|---|---|
| *0.0762* | *R* | Recharge (infiltration) rate (feet/day) | 0.67 | 1.33 | |
| *0.080* | Sy | Specific yield, Sy (dimensionless, between 0 and 1] | | | |
| 5.40 | K | Horizontal hydraulic conductivity, Kh (feet/day)* | 2.00 | 4.00 | In the report accompanying this spreadsheet (USGS SIR 2010-5102), vertical soil permeability (ft/d) is assumed to be one-tenth horizontal hydraulic conductivity (ft/d). |
| 10.670 | x | 1/2 length of basin (x direction, in feet) | | | |
| 6.900 | y | 1/2 width of basin (y direction, in feet) | hours | days | |
| 1.000 | t | duration of infiltration period (days) | 36 | 1.50 | |
| 5.000 | hi(0) | initial thickness of saturated zone (feet) | | | |

| | | |
|---|---|---|
| 5.199 | h(max) | maximum thickness of saturated zone (beneath center of basin at end of infiltration period) |
| 0.199 | Δh(max) | maximum groundwater mounding (beneath center of basin at end of infiltration period) |

| Ground-water Mounding, in feet | Distance from center of basin in x direction, in feet |
|---|---|
| 0.199 | 0 |
| 0.066 | 20 |
| 0.012 | 40 |
| 0.005 | 50 |
| 0.002 | 60 |
| 0.001 | 70 |
| 0.000 | 80 |
| 0.000 | 90 |
| 0.000 | 100 |
| 0.000 | 120 |

Re-Calculate Now




## Disclaimer

This spreadsheet solving the Hantush (1967) equation for ground-water mounding beneath an infiltration basin is made available to the general public as a convenience for those wishing to replicate values documented in the USGS Scientific Investigations Report 2010-5102 "Groundwater mounding beneath hypothetical stormwater infiltration basins" or to calculate values based on user-specified site conditions. Any changes made to the spreadsheet (other than values identified as user-specified) after transmission from the USGS could have unintended, undesirable consequences. These consequences could include, but may not be limited to: erroneous output, numerical instabilities, and violations of underlying assumptions that are inherent in results presented in the accompanying USGS published report. The USGS assumes no responsibility for the consequences of any changes made to the spreadsheet. If changes are made to the spreadsheet, the user is responsible for documenting the changes and justifying the results and conclusions.

# Specific Yield--

# Compilation of Specific Yields for Various Materials

---

GEOLOGICAL SURVEY WATER SUPPLY PAPER 1662-D

*Prepared in cooperation with the California Department of Water Resources*

TABLE 29.—*Compilation of specific yields for various materials*

[All values rounded off to nearest whole percentage]

| Material | Valley fill, California (Eckis, 1934) | Mokelumne area, California (Piper and others, 1939) | Santa Ynez River basin, California (Upson and Thomasson, 1951) | Sacramento Valley, Calif. (Poland and others, 1949) | Smith River plain, California (Back, 1957) | Ventura County, Calif. (Calif. Water Resources Board, 1956) | Santa Margarita Valley, Calif. (Calif. Dept. Public Works, 1956) | Tia Juana Basin, Calif. (Calif. Water Rights Board. 1957) | San Luis Obispo County, Calif. (Calif. Water Resources Board, 1958) | San Joaquin Valley, Calif. (Davis and others, 1959) | Eureka area, California (Evenson, 1959) | Santa Ynez Basin, Calif. (Wilson, 1959) | Rechna Doab, Pakistan (Kazmi, 1961) | Napa-Sonoma Valleys, Calif. (Kunkel and Upson, 1960) | Humboldt River Valley, Nev. (Cohen, 1963) | Unconsolidated alluvium (Preuss and Todd, 1963) | Little Bighorn River valley, Montana (Moulder and Others, 1960) | Average specific yield |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clay | 1 | 4 | 2 | 3 | 1 | 0 | 1 | 1 | 3 | 3 | 3 | 5 | 3 | 3 | 1 | ----- | ----- | 2 |
| Silt | 10 | 4 | 12 | 3 | ----- | 3 | 10 | 10 | 5 | 5 | 10 | 5 | 5 | 5 | 19 | 4 | 17 | 8 |
| Sandy clay | 10 | 4 | 12 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 10 | ----- | ----- | 10 | ----- | ----- | ----- | 7 |
| Fine sand | 21 | 26 | 12 | 10 | 10 | 25 | 28 | 25 | 25 | 10 | 20 | 20 | 27 | 20 | 26 | 23 | 32 | 21 |
| Medium sand | 31 | 26 | 30 | 20 | 15 | 25 | 28 | 30 | 25 | 25 | 20 | 30 | 28 | 20 | 28 | 28 | 32 | 26 |
| Coarse sand | 31 | 35 | 35 | 20 | 25 | 25 | 28 | 32 | 25 | 25 | 20 | 30 | 23 | 20 | 27 | 28 | 32 | 27 |
| Gravelly sand | 31 | 35 | 35 | 20 | 25 | 21 | 22 | 28 | 21 | 25 | 20 | ----- | 23 | 20 | ----- | 22 | 32 | 25 |
| Fine gravel | 27 | 35 | 35 | 25 | 25 | 21 | 22 | 26 | 21 | 25 | 25 | 25 | 26 | 25 | 19 | 17 | 25 | 25 |
| Medium gravel | 21 | ----- | ----- | 25 | 25 | 21 | 22 | 23 | 21 | 25 | 25 | 25 | 26 | 25 | ----- | 13 | 25 | 23 |
| Coarse gravel | 14 | ----- | ----- | 25 | 25 | 21 | 22 | 18 | 21 | 25 | 25 | 25 | 26 | 25 | ----- | 12 | ----- | 22 |